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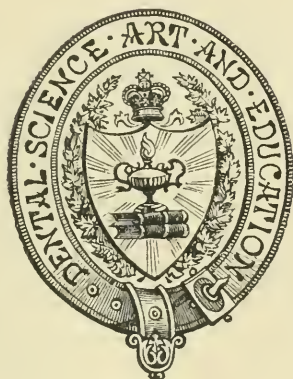
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DOMINION DENTAL JOURNAL.

(Official Organ of the Ontario Dental Association)



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DOMINION DENTAL JOURNAL.

VOL. III.

TORONTO, JANUARY, 1891.

No. 1

Original Communications.

Dental Journalism in Canada.

By C. N. JOHNSON, L.D.S., D.D.S., Chicago, Ill.

If the profession in Canada is to advance as rapidly as its possibilities admit, it must develop strength inherently within its own borders, irrespective of whatever help may come from the outside. It must inaugurate an *esprit de corps* among its members that shall encourage home talent and home endeavor. The time has come when it should be considered disreputable for a Canadian dentist to disparage Canadian enterprises having for their object the elevation of the profession. This tendency to belittle everything Canadian has done more to retard the profession in that country than anything else. Instead of decrying the efforts of those who are working for the advancement of Canadian dentistry, let every practitioner at least lend a word of encouragement, and if a uniform sentiment is exerted in the right direction just at this time, it will do wonders for the profession. Dentistry in Canada never promised so well as now. Societies are being formed, the college is doing good work, matriculation is on a splendid basis, and last, but not least, the DOMINION DENTAL JOURNAL is in the field ready to do its full share in developing home talent.

But from current report I am afraid the profession are not doing

their whole duty in supporting it as it deserves. The Journal should appeal to the patriotic pride of every dentist in Canada, irrespective of its merits, and it gives me pleasure to add with equal emphasis that its merits should force it into favor irrespective of patriotic pride. As an "ex-Canuck," I am proud that such a journal should be published in the Dominion, and I appeal to the good-will and generosity, the patriotism and the principle of every Canadian dentist, to support his home journal. If you do not quite like the nature of the articles published in it, I suggest that you write articles for it yourself. You are sure to be pleased with your own articles at least, and you will be encouraging the Editor.

I was surprised and pained to see by an editorial, "Fair play for this Journal," that a dental supply house in Canada is working against the Journal. I cannot understand such a spirit as that among Canadians. It is an attitude unworthy of honorable men, and is doubly deplorable when directed against a home enterprise. It is that very spirit of petty prejudice running through the whole of Canadian dentistry that has kept it where it is.

What has made the profession advance so much more rapidly in the States than in Canada? It would be well for the Dominion dentists to look to themselves for answer to this question. They have the same brains, the same ability, the same opportunity as their American brothers—but they lack the *liberality*. With them it is nothing but the almighty ME. They have not a generous thought for their brother practitioners or for the profession. They narrow their own impulses by nursing their own conceits, and they belittle the calling which they represent.

This is not meant to be an unkind arraignment of my brothers across the lines, for some of the best friends I have in the world are numbered among them. Nor is this request to support the DOMINION DENTAL JOURNAL made by one who is in any way connected with it. In fact, it is made by one who is connected editorially with another journal, so that mercenary motives cannot be attributed to the plea.

But loving Canada as I do; and having at heart the success of Canadian institutions, I have been grieved to see a certain element striving to disparage what I believe to be a noble, self-sacrificing effort to elevate the profession in my native country.

Death from Apoplexy during Inhalation of Nitrous Oxide Gas.

By J. D. THOMAS, D.D.S., Philadelphia, Pa.

Referring to the case of death from apoplexy after inhalation of nitrous oxide gas, which occurred in this city about a year ago, I will state the circumstances of that sad occurrence.

The gentleman had repeatedly taken the gas in the past, and was a pleasant subject for its effects. On the occasion referred to he called to have two teeth extracted. He was given the gas for that purpose, and after his recovery, the operator went to his desk, and the gentleman proceeded to rinse his mouth, carrying on conversation in the meantime. He used one glass of water while sitting in the chair, after which he got up and walked to the washstand, a distance of eight feet, re-filled the glass, and back to the cuspidor beside the chair, and stood rinsing his mouth. This he repeated until he had used four glasses of water, while standing, and occupied at least twenty minutes. During this time conversation continued uninterruptedly, the operator and patient being friends of long standing, and there was not the slightest indication that he was not perfectly well. At this time he lay down his napkin, with a remark upon the relief obtained by the extraction, and placing himself before the mirror, endeavored to look at the cavities where the teeth came from. He used his right hand to press back the cheek (the teeth were the first and second sup. molars), and the first symptom was when he removed his hand from his face he drew the fingers together, and said, "There is a numbness about that hand." He presented a pale appearance, and it was thought that faintness had been produced by looking at the sockets, as is sometimes the case, and he was told to lie down on the couch near by and brandy offered him; by that time he was powerless and unable to articulate. Consciousness remained to some extent for about ten minutes, and he died four hours and a half after. At the coroner's inquest the physicians were unanimous (Dr. Girvin, Dr. Drysdale and Dr. Hare) in their testimony, that the cause of death was apoplexy, and not from the effects of the gas. A brother of the deceased testified to the family feeling satisfied that death was independent of the effects of the gas, and the jury's verdict exonerated the operator from all responsibility for the result.

Another Death under an Anæsthetic.

By L. D. S.

On Saturday afternoon, the 26th of last April, a young man named Doreat Perrin, aged about twenty-four, called upon Dr. Gendreau, dentist, of Montreal, to have a tooth extracted, and begged the dentist to give him the Vegetable Vapor, which Dr. Gendreau had, like many other practitioners, administered for some time to the exclusion of nitrous oxide gas. So much dissatisfaction had been generally expressed relative not only to the frequent absence of nitrous oxide in cylinders supplied, but as to its deleterious quality, that the introduction into Montreal of a branch of the manufactory of Vegetable Vapor led many to test, and at last to welcome it as a decided improvement upon any other anæsthetic in use. Dr. Gendreau had been particularly careful not only to provide himself with the very best apparatus, but frequently to refuse any anæsthetic in constitutional conditions which seemed at all objectionable. When Mr. Perrin asked for an anæsthetic Dr. Gendreau made sure that the patient was not under the influence of liquor; that several hours (five) had elapsed since his last meal, and that the patient to all appearances, as well as by critical examination and inquiry was in good health. The vapor was administered in precisely the same way as nitrous oxide, the usual gag having been first inserted between the teeth. The hour was 11.30 a.m. The patient was somewhat nervous, but the anæsthetic was not forced upon him; respiration was perfectly natural; and deep sleep produced. The offending tooth was extracted, and while the assistant was waiting for the recovery of the patient, the operator turned for a moment to place his forcep on his stand, when he heard the patient gasp, and exhibit signs of distress. Instantly they lifted him from the chair, placed him on his back on the floor, and after using aqua ammonia, performed artificial respiration, at the same time sending for a physician. In less than five minutes the patient was dead.

An inquest was held, when coroner's jury returned the following verdict: "The jury are unanimously of the opinion that the deceased died from syncope caused by the administration of gas,

and they exonerate Dr. Gendreau from all blame." It has long ago ceased to be a mystery why the coroner did not order a *post-mortem*, as this gentleman for over half a century has possessed such almost autocratic power, that Montreal coroner's inquests have become the ridicule of the Province, and neither press nor people seem to protest.

Similar cases occurring under nitrous oxide gas, of which a few of the many are reported in the article on "Anæsthetics" in the "American System of Dentistry," may seem to justify such procedure; but where the reputation of a professional man is at stake, the public and the profession would have preferred something more scientific and reliable than the vague opinion of inexperienced jurymen, even when instigated by an "experienced" coroner.

Any question as to the purity of the anæsthetic was effectually disposed of. Dr. Bourdon, Examiner on Anæsthetics, of the Board of Examiners, of Quebec, and the President of the Board, shortly afterwards inhaled and tested the same cylinder, and carefully examined the apparatus used by Dr. Gendreau, and there could be no doubt that both the vapor and the apparatus were in good condition.

Moreover, to make assurance doubly sure, the same cylinder was obtained by the Editor of this Journal, and in conjunction with his associate, Dr. Bazin, it was used with remarkable success and most pleasant results in several cases.

What is Vegetable Vapor? Mr. Jas. F. Babcock, Analytical and Consulting Chemist, State Assayer and Inspector of Liquors, late Professor of Chemistry in Boston University and Massachusetts College of Pharmacy, made a chemical examination of one hundred gallons, and reported that he found it to consist of a basis of nitrous oxide, combined with the volatile active principles of several well-known vegetable anodynes and sedatives, which increase its efficiency, and that it is free from chloroform and any objectionable constituents. The ingredients used in its manufacture are prepared by well-known wholesale botanic druggists of Boston, who certify that it is free from chloroform, ether, "or other similar dangerous drugs." These herbs are hops, celery, motherwort, liquorice-root, and English valerian, dissolved in a solution of alcohol. They are sedative, antispasmodic and diaphoretic in their effect, and unquestionably produce a deeper, calmer and

more prolonged anæsthetic, with no lividity, little or no snoring, no sense of oppression, or irritation of the lungs.

When nitrous oxide was first introduced to the profession, it had to go through the usual suspicion, and, no doubt, this newest contribution will have to do the same; but so far it has certainly proved to be the safest anæsthetic on record. The *London Lancet*, in reviewing a verdict of censure on a dentist in a case of death during the inhalation of nitrous oxide, remarked: "The nitrous oxide had no more to do with the fatal issue, either directly or indirectly, than if it had never been brought into the room. The patient manifestly fainted from terror. Her syncope was just a result of the reaction of an overstrung nervous system; and if the dentist had only laid her flat on the floor, she would probably have recovered," etc. In most cases of death, so little gas was given, and the symptoms were evidently those of syncope after fainting, that the gas could not directly be held responsible. However, there are objections to nitrous oxide which do not present themselves with the vegetable combination. None of the herbs can, of themselves, or in combination with alcohol and nitrous oxide, produce any dangerous effects. It is being used in general surgery to some extent; several serious operations having been performed—the anæsthesia lasting twenty or thirty minutes. No matter by whom introduced, or how, it merits the attention of the profession. Though it is necessarily a little more expensive than nitrous oxide, that should be no consideration.

Hæmorrhage and its Results.

By LUKE TESKEY, M.D.C.M., Surgeon to Toronto General Hospital.

(Read before the Ontario Dental Society.)

The term hæmorrhage literally means a flow of blood, but when used technically does not refer to the loss of a small amount of blood, but only to such a loss as is likely to affect more or less perceptibly the entire system. The amount of blood that may escape from the vessels without causing any systemic disturbance depends largely upon the location. A very small amount escaping from the vessels into the substance or ventricles of the brain, for

instance, would be serious, and might be fatal. The hæmorrhage to which this paper especially refers, however, is what may be called external hæmorrhage, such as might be associated with operations in the mouth.

It is well to remember, at the outset, that the blood may very properly be considered one of the tissues of the body, with very important functions to perform. Not only through its agency is internal respiration carried on, but it would appear to be the laboratory in which the elements of nutrition are so operated upon as to fit them for the nourishment of the tissues to which they are carried—a kind of internal digestion previous to assimilation. The active agents in both instances are, no doubt, the blood corpuscles. By keeping these two important functions of the blood in mind, we can the more readily understand the effects of hæmorrhage.

Hæmorrhage may be caused mechanically by too severe and extensive operations upon the soft tissues of the mouth, which, speaking generally, are uncommonly vascular; or may be due to the condition of the blood itself. Such conditions may be due to heredity, or may be brought about by diseases which directly interfere with its proper organization, such as typhoid fever, septicemia, scorbutis, and all other diseases in which powerful organic poisons have been inoculated into the system. All these things should be kept in mind when a patient submits himself for an operation shortly after recovering from a severe illness. It is well to remember, too, that infants are exceedingly susceptible to injury from even slight hæmorrhages, it having been determined by observations in connection with maternity hospitals in France, that to them the loss of five or six ounces of blood may be a very serious matter. During youth and adult age the susceptibility to injury from loss of blood differs much with individuals, and in the same individual with varying conditions. A healthy, robust young man may lose several pounds of blood without any trace of injury being noticeable a couple of weeks later. Much depends upon the rapidity of the loss—a comparatively small amount lost rapidly producing greater immediate effects, such as fainting and vomiting, than a much larger amount lost slowly. In old age, the injurious effects of hæmorrhage are again increased, and resemble somewhat those of infancy. Old people do not recover easily from such an

injury, and the loss of even a few ounces of blood often seem to be the starting point to complete dissolution.

The immediate effects of hæmorrhage, such as shock and fainting, may usually be easily overcome by appropriate treatment, and are not as important as the remote and more insidious results. These latter are interesting as well as important, and I will give you a report of several cases which have fallen under my own observation, and which are, no doubt, typical of others :—

CASE 1.—The patient, a girl about nineteen years of age, had twenty-three teeth extracted. The hæmorrhage continued for three days, and she was confined to her bed for about a week and a half. For more than a year she was unable to do any work, and she believes that she never fully recovered, although that may be a mental exaggeration. Her symptoms were paleness, well-marked loss of weight, palpitation of the heart, erratic appetite, and general debility. She attributes her condition to taking gas.

CASE 2.—A young man, twenty-six years of age, just convalescent from typhoid fever, had two lower teeth extracted. The soft parts were considerably lacerated, and the hæmorrhage continued for two days. This was followed by a great exhaustion, so that he returned to bed. Soon after he exhibited the symptoms of rapid consumption, which continued until his death.

CASE 3.—An old man aged seventy-six had about half a dozen roots removed. The bleeding continued for one night and part of the next day. The patient grew pale and gradually became more feeble. The prostration finally compelled him to go to bed, death resulting about three months later.

Education Versus ——— ?

By C. N. JOHNSTON, L.D.S., D.D.S., Chicago, Ill.

In the October number of the DOMINION DENTAL JOURNAL, on page 185, I notice some remarks by a correspondent who fortunately neglects to sign his name. I am glad the name was omitted, because I wish to reply to him, and if I attack the letter without knowing the writer, it will be understood that my criticism is meant for the matter instead of the man. The letter at first glance might be deemed not worthy of serious consideration, but

I accept the writer as a type of a large class in the profession whose main ambition seems to display itself in a determination to drag dentistry into the dust.

So much for introduction; and now, my dear correspondent, let us commune together for a few moments.

You say that the DOMINION DENTAL JOURNAL takes too high a stand, that "the profession is new in Canada, and the dentists cannot afford to starve for the sake of keeping up appearances, societies, journals."

If the profession is new, all the greater need for the very work the Journal is engaged in—all the more urgent necessity for the dissemination of that kind of knowledge which shall bring the profession out of the slough into which just such men as you have placed it. And do you really believe that those men who attend societies and subscribe for journals are the ones who come nearest starving? No, sir; they are the best fed (intellectually and otherwise), the best dressed, the best demeaned, the most in demand of any in the profession. They constitute *the* profession. Let me tell you who it is that starves. It is the narrow-minded mongrel—half dentist, half dough-dead—who shuts himself away from professional intercourse, and hugs his precious little soul in solitude, barking only occasionally when he sees something to snarl at in his profession. That is the individual who starves, not only in body, but in brain.

Your next remark is characteristic of your class. "I never asked anybody for ideas, and I don't give any."

Thank heaven for the latter statement! If you gave many such ideas as you have expressed in this letter, pity the poor dupe who would accept them. As to the first statement, you might have saved yourself the trouble of writing it. A casual observer in reading your communication could have surmised that you "never asked anybody for ideas."

Your slur on "educated young men" carries with it a small grain of truth mixed with a predominance of prejudice. It is true that many of our young graduates have more theory than they can apply, but that is not the fault of the theory, nor is it an argument against education. When you decry theory, my friend, you forget that every practical operation you perform in your office must have had some theory back of it for its development.

"Just let dentistry slip along in the old way." Yes, that's your whole argument in a nut-shell. When you wrote that, did you stop to consider what the old way was? The old way was for the barber to have a turnkey in some remote corner of his drawer, and serve the public indiscriminately by pulling teeth or cutting hair, as the case seemed to demand. That was the old way; and had dentistry depended on such men as you for its development, it would have been the way yet.

Then you say, "We don't want highly educated men."

According to your idea, a license to practise dentistry should carry with it the requirement that a man must be as nearly as possible an idiot, that he must be careful not to know too much, that in order to succeed in saving teeth he must stumble in his syntax. The greater the wisdom the worse the work, the bigger a dummy the better a dentist! Is that the line on which you conduct your practice? Do you ascribe your success "for *over* twenty-eight years or *more*" to this?

And if you "want good mechanics who can work in their shirt sleeves," why don't you join the baker and butcher, the barber and blacksmith? They are all mechanical in their way, and they work in their shirt sleeves. Possibly through a devious process of descent you have inherited your ideas of the proper practice of your profession from the two latter. At one time the barber and blacksmith were the only practitioners of dentistry. I had no idea till now that they had left so lasting an effect upon their followers.

No, my friend, in all kindness, you are mistaken. The whole tenor of your argument is that knowledge is unnecessary—that education is a snare. Do you know what that argument has done for the world in the past? It raised revolt against Columbus, the man who discovered the land in which you live. It imprisoned the genius who first claimed that the world moves. It, accompanied with religious intolerance, burned Servetus at the stake, and kindled the fires of the Inquisition. Above all things else, it has proved a deplorable drawback to advancement and civilization. But the argument is fast failing, and you are out of touch with the present age. You should have been born a few hundred years ago. You would have made a precious jewel for the sixteenth century.

Our Laboratories.

By "PHINEAS."

What a rare thing it is to find a dentist who is proud of his laboratory. To the average practitioner the name suggests a small, close room, furnished with a work-bench, lathe, and vulcanizer, and presenting three or four shelves filled with such boxes, bottles, plaster casts, scrapers, files and other instruments, as are not lying on the bench. Should a visitor or patient find his way into this apartment, an apology is made for its appearance, and the dentist mentally resolves to have everything in apple-pie order before any one else comes in—but he won't. Some men are naturally systematic and orderly, others have become so as the result of long and careful training, but the average man rather enjoys disorder, and while, as a matter of business, his reception and operating rooms may be so carefully kept as not to offend the most fastidious taste, he gets even by allowing the laboratory to take care of itself. It is not my intention, however, to justify such a mode of procedure, but to make a few suggestions, which may be of some value to those who are trying to make the laboratory what it should be—a workroom adapted to and arranged for the work of prosthetic dentistry.

In the first place, the laboratory should be well lighted, with the bench in front of a window. It is difficult to work by a side light, and still more so by a light from behind. Many operations in the laboratory need to be watched very closely, and to avoid straining the eyes everything should be done in the best available light. The bench should be just high enough to allow the dentist to sit comfortably while at work, and should have a lathe permanently attached to it. It should contain a drawer for gold and another for rubber work, to which others may be added if there is sufficient room. Wherever gas is available a pipe should be run along the whole length of this bench with four taps. To one of these attach a bracket for lighting purposes, with joints to permit of movement in every direction. Have rubber tubing attached to the others and arrange one for waxing up, one for heating water, and one for vulcanizing. For waxing up use an ordinary Bunsen burner with

one of the little attachments that sends the flame out horizontally, and you will not only avoid dropping melted wax into the burner, but will save time and gas as well. For heating water use a large solid flame burner and a wide pan, and you will be surprised to see how quickly water can be brought to the boiling point. Such a burner can be bought for a couple of dollars, and no dentist who has once become accustomed to its use will ever again be without one. They can be used for melting zinc or lead, and when it comes to gold soldering of any kind the dentist who possesses one of these burners is master of the situation. All that is necessary is to place the case, suitably invested, on an iron support, so arranged as to bring the work in the hottest part of the flame. A sheet iron cylinder with wire across the top answers the purpose very nicely. Then turn on a very little gas and allow the whole to heat up gradually, turning on more gas from time to time. After the full force of the flame has been applied for a little while, take a common blow-pipe and blow from the side of the flame upon the case, and the hardest solder can be made to flow without the slightest difficulty. There need be no hurry, and the blow pipe need only be used to melt the solder, never to heat the investment. When the soldering process is completed, the gas can be gradually turned off and the case left to cool. The heat radiating from the burner and supports will prevent too sudden cooling, and throughout the entire operation the heat is so uniform that a case can be brought to a full red heat in ten minutes, and cooled again in the same length of time, without the slightest danger of breaking a tooth.

The lathe is one of the most important of laboratory appliances, and every dentist should possess a good one. Lathes made for the use of machinists are not suitable for dental purposes, while those made for dentists are usually mounted on a frame which becomes rickety after having been used for some time. In getting a lathe, a very good plan, and one which combines practicability with cheapness, is to buy a good lathe-head and attach it to your bench, using the frame of a worn-out sewing machine to supply the power. Such a frame can be bought for a few shillings from any dealer, and will be found to possess several advantages. It is strong and serviceable, and of just the proper height for the sitting position. Moreover, both feet can be used if desired, and, when the habit has been acquired, will be found much less tiresome than using either alone.

In using a corundum wheel it is necessary that the surface be kept constantly moist, otherwise the wheel soon loses its grit. To secure this result without flooding the wheel small lathe-boxes can now be purchased containing a moist wick which is kept constantly in contact with the wheel. In the absence of such an arrangement, however, a wide-mouthed bottle filled with water, with a sponge in its mouth, will answer the purpose, and will be much better than the plan pursued by many dentists of picking up a sponge and moistening the wheel whenever it becomes dry.

The keeping of the hands in a presentable condition or the ability to make them so at a moment's notice is of considerable importance to a dentist, who may be called at any minute to leave the dirtiest work of the laboratory and go into the presence of a lady patient. While a dentist should not be too fastidious about such matters, the use of an old pair of gloves when handling dirty flasks and doing other disagreeable work will do much towards keeping the hands clean and preserving their natural softness. Almost any stains of the laboratory, however, can be removed by the use of a little baking soda, followed by a good rubbing with soap; and stains which cannot be removed in this way will always yield to a thorough rubbing with warm oil and powdered borax.

An Old Dentist's Advice to Students.

By "ANTIQUITY."

I remember when I was a dental student in the dark ages of the profession, my tutor was giving some good advice to a patient about the care of the teeth, showing her how she might manage to preserve her natural teeth to old age. Suddenly, the young lady laughingly said, "Now, why do you give such advice if it is perfectly correct, because if everybody followed it, 'Othello's occupation' would be gone, and you'd have nothing more to do in dentistry?" "I will tell you frankly," he replied, half jokingly; "just because I know it is perfectly certain that the advice you get in one ear to-day will be out of the other before you're a day older."

Now, in the gossip of an experienced practitioner I here purpose

to give students, I will do them the justice of believing that the majority are animated by a sincere desire to quit themselves like men for the difficulties and drawbacks of the profession of their choice, and that they do not intend to be satisfied by shirking or sluggishness.

First of all, my boys, just start out with the determination to serve your tutor as a matter of duty, and not of slavery. If you've got the notion into your head that laboratory work is menial, and that it is not your business to clean up the dirt you must necessarily make; if you imagine that your tutor should hire a boy to run after your heels with a dust pan and a broom, give up studying dentistry, and go into poetry, or perhaps theology. You are altogether too high-toned *in your fingers* for a laboratory, and unless you buckle down to business seriously, be just as much of a blacksmith, moulder, carpenter and tinker as every student must be who is determined to master mechanical dentistry in all its meanest as well as magnificent details; unless you do this, you may count upon occupying a back seat in practice. I rejoice at the change which exacts a matriculation examination; which insists that the laboratory shall be something more scientific than a jeweller's bench; which forces students to understand the why and the wherefore, as well as the way to produce a result. But after all the theory in your head, and the science in your mind, you must have the manipulative skill in your finger ends. Whatever then of detail you can learn of any branch of mechanism which has any bearing upon mechanical dentistry, grasp it. You'll be a better student and a better dentist.

I have had much experience of students, and I know so well just what to expect, that I confess I prefer a poor boy to a rich one; a lad who is more anxious to get work, than one who is anxious to shirk it. In fact, boys do not seem to me nowadays to have the common sense of boys half a century ago. They are more frequently insolent and neglectful, and have little idea of the duty they owe to their tutors. It is impossible for a student to become proficient in the laboratory unless he repeats again and again any work he attempts. Too many imagine that because they can pack and vulcanize a set they need not continue doing it; but that is pure nonsense. Under the customary method in England of indenturing apprentices to trades for seven years, and dental

students for four, better mechanics are made in the one and better mechanical dentists in the other than our college systems produce. We give more smattering ; they grind students from the A, B, C of mechanical dentistry, and, as a rule, they do more laboratory work in four months of their first year, than our graduates have done in the course of a whole college career. In my next I hope to say something more practically interesting to "our boys."

Proceedings of Dental Societies.

The College Dinner.

The sixth annual dinner of the Toronto School of Dentistry, held at the Rossin House, Wednesday evening, November 26th, was an unprecedented success. Mr. H. D. Boyes, the President, occupied the chair, and at his right sat Dr. W. T. Aikins, representing the Faculty of Toronto School of Medicine ; H. T. Wood, President Board of Directors of the Royal College of Dentistry ; Dr. J. B. Willmott, Dr. Luke Teskey, Dr. Stewart and Dr. W. E. Willmott. Immediately at the left of the chairman were Dr. Bingham, representing the Faculty of Trinity Medical School ; Dr. Basanko, Barrie ; Dr. Henderson, Dr. Branscombe, Dr. Roberts, Dr. McLaughlin, Dr. Webster, Dr. W. C. Adams, Dr. Frank Stowe, Messrs. C. H. Hubbard, S. B. Chandler, C. H. Riggs, F. Adams, J. G. Adams, and J. F. Chittenden, Hamilton ; Trinity Medical School, A. A. Sutherland ; Toronto Medical School, J. A. Cowper ; School of Pharmacy, W. T. Kendall. The officers and committee having charge of the banquet were as follows :—H. D. Boyes, President ; C. W. F. Lennox, First Vice-President ; H. Darling, Second Vice-President ; H. C. Lake, Secretary ; and Messrs. William Richardson, G. A. Harrington, Geo. S. Martin, W. M. McGuire. Besides these about one hundred young and bright students sat down to dinner, after Dr. Aikins had asked a blessing. The excellent spread was worthy of the guests, and when the physicians and students had eaten and were satisfied, the chairman proposed the first toast on the list, "Queen and Royal Family," whereupon the company joined heartily in singing the National Anthem. President Boyes delivered the annual address. He

urged the students before him to appropriate the excellent opportunities offered them by the Ontario School of Dentistry. He eulogized the grand work of the Royal College of Physicians and Surgeons, and of the Royal College of Dental Surgeons. This latter institution imposed the highest and hardest course of study of any in America, and for this all present should be proud. The doctors and dentists of Toronto were most fraternal, but regretted that the latter were under great obligation to the former.

Dr. Aikins, in responding to the toast, "Sister Institutions," said that ten thousand people in Ontario were at present dying of consumption. Two thousand five hundred succumbed every year to this dread disease, and he was not surprised that our people were looking toward Berlin. In many instances the origin of consumption was in the teeth, and he could not agree with the President that the dentists were indebted to the doctors. However this might be, it was gratifying to know that the two professions were closely linked together. He hoped it would continue, but he feared for the dentists, when he considered the great work of the Christian Scientists in extracting teeth. In conclusion, he urged the students to do everything as perfectly as fingers and eyes could do it. They should be proud of the connection between their school and the university. "Be careful of the poor," said the speaker, "those especially who can't pay you ; take care of them, and you will lose nothing."

Dr. Bingham, speaking for the Trinity Medical School, read a letter from Dr. Geikie, Dean of Trinity, expressing regret at being absent. The speaker congratulated the students on their appearance and standing. This was greatly due to their excellent faculty. To emulate their teachers would be a worthy endeavor.

The man who is most successful was the man who was not only master of himself but master of his profession. If the facilities of the medical college to which the speaker belonged could be of any service to the dental students in getting up their work, those facilities were open to them, and he was satisfied that the Faculty would be delighted to have them enjoy the advantages. This was loudly cheered by the students, and later on the President expressed the thanks of the school, for the very generous invitation of her sister school. The toast to the Faculty and Board brought much merriment to the students, especially the "freshies," who appeared

to think that their time for getting even with the lecturers had come. Notwithstanding this, the sound address of Dr. J. B. Willmott was cheered to the echo. He spoke of the standing of dental and medical colleges in Canada compared with those of the United States. Until recently, all that had been necessary for a medical or a dental student across the line to graduate was to be able to sign your name and produce a \$5 bill. He was glad to know that such a condition of things did not exist in Canada. Our institutions were the best on the continent. Here it required thirty-six months of hard work in order to be admitted to practise, while in the United States little more than half that time, with comparatively little work, was required to place a student in either the medical or dental professional ranks. In closing, he said he was proud of his students, and he hoped that in after years they would be proud of the institution whence they had gone.

Drs. Teskey, Stewart and W. E. Willmott followed in happy speeches, much to the delight of the students. The speakers were of opinion that the preceding gentlemen had given the students enough logic to permit of a little hilarity.

The other toasts were responded to as follows:—Dental Profession—Dr. Bosanko, Barrie; Medical Students—Mr. A. A. Sutherland, of Trinity Medical School; Graduating Class—Dr. McLaughlin; Freshmen—Mr. J. Billings. During the evening Messrs. Holmes, Robertson, Richardson and others, excellently accompanied by Corlett's orchestra, sang rousing college songs, which were much appreciated.

Union Dental Meeting in Boston.

By J. A. BAZIN, L.D.S., Montreal.

The Union Dental meeting in Berkeley Hall, Boston, October 28th to 31st, comprising members of fourteen organizations, visitors from distant localities, together with an extensive and valuable collection of dental supplies, with all the latest novelties, was exceedingly attractive and well attended. The President, C. W. Clement, D.D.S., formerly of Canada, but now of Manchester, N.H., called the large assembly to order, and to the "cracking of the nuts and

picking out the meats," and Dr. Bartholomew, of Springfield, opened one of fine flavor, "Professional Ethics."

The Doctor was accorded close attention, and many points presented were received with due appreciation. He dealt with the subject under various heads, defining "Ethics" to be "a system of morals formulated out of unwritten laws that are accepted as *best* by common custom. It recognizes the fact that character develops by what it feeds upon. A dentist can rise and remain no higher in his professional life than the weakest link in his moral chain can lift and hold him. It is a good plan for a man, however well fixed he may be, to sit down for an hour now and then and examine himself as to method and motive in his daily life, and decide whether or not he is moving along on a sound and healthy plane toward the things that make for a broad-minded and Christian character. He was exceedingly happy in his interrogatives. Do you speak of nearly all your professional acquaintances as below par? Are you in the habit of circulating everything you hear to their disadvantage? Do you say I *guess* that will do, when you feel certain it will not do? Are you cleanly as to your office arrangements and instruments? Is the odor of your breath laden with tobacco or whiskey? Is the perfume of your lady patient's hair, mingled with greasy odor of her cook on your headrest? and the refined and gentle "instincts" of your patrons violated by the "outstinks" of your person? Finally, the dentist should be among the foremost outside his office in all things that make for the public welfare.

This paper was followed by a pleasing account of the Dental Section of the Medical Congress at Berlin, by Dr. Shepard; 303 dentists were registered as present—thirty from United States, nineteen from England, twelve Americans settled on the Continent, and many others holding American diplomas. Many notable men were present, and valuable papers were presented; 6,000 M.D.s added to the interest and enthusiasm of the gathering. On Wednesday morning, Clinics by Drs. Young and Blackstone, of New Hampshire, in rapid filling with soft gold combined with cohesive, the latter putting in a large filling in about four minutes. Implantation, treatment of fracture of inferior maxilla, and others.

The principal paper for the evening was by Dr. T. Fillebrown, on "Vitality as a Germicide," presenting citations from prominent

scientists and medical men, as well as cases under his own observation, which seemed to him to call in question some of the conclusions of Dr. Miller as to the germ theory. Considerable discussion followed, in which Drs. Pierce, of Philadelphia, Bracket, Andrews, and others joined.

Dr. Townsend's paper on "Abrasion of the Teeth" and treatment, was given close attention, and some good points offered.

In the evening, the "Rights and Duties of Dentists at Common Law," by B. S. Ladd, Esq., of Boston, was ably presented; the rights being quite offset by our duties. Thursday morning was routine work by the various societies, such as election of officers, etc., followed by papers on "Copper Amalgams," and "Pulp Caps." In the afternoon, Dr. Harlan, of Chicago, secured the hearty approbation of the large company present, by his able and exhaustive paper on "The Dental Pulp; its destruction, and methods of treatment of teeth discolored by its retention in the pulp chamber or canals." It would only be mutilation to make extracts, we hope to see it in some of the journals shortly.

But, even with such an excellent and attractive paper, it remained for Dr. R. R. Andrews with his photo-micrographs of the "Development of the Enamel," to enthuse and electrify his audience. Those slides must be seen as they appear thrown on the canvass, to in any degree realize the careful and exact labor that this earnest student has given to this subject. It seemed to be the opinion of the meeting that the Doctor has fully established his position as against the New York triumvirate.

As an easy let-down from the high plane we were lifted to, Dr. Cooke, of Boston, read a paper, and illustrated in a similiar manner the "New Formations in the Pulp Cavity." He had had under examination upward of five thousand teeth, and had found about thirty per cent. with secondary dentine deposit in the pulp cavity, and in the canals; some loose, more attached to the walls, and often intercepting access to the canals. This large percentage was a surprise to all, and many were of the opinion that failure to save teeth might be due to this cause.

After this, Dr. Bonwill presented charts and diagrams illustrating what he called "God's plan in constructing the dental arch." He has given years to this study, and feels sure that he has found the absolute rule governing all mechanical construction for artificial dentures.

And with the next morning's clinics, where the great trouble was to get sight of the skilful things being done, closed the best meeting that has taken place at the "Hub" within my recollection. It is a good place to go to at any time, but when you can catch on to such a whole-hearted lot as get together at a dental train, you may be sure of one thing, you will be awful sorry when you let go.

I cannot refrain from expressing my astonishment at one thing which was allowed at all the sessions of the Convention, and that was the want of intelligent ventilation. Usually the air was allowed to become so offensive that it almost loosened the teeth to get it down, then when vitality had been reduced almost to a state of "coma," the windows were opened and those nearest to the riving current, moved by a spirit of self-preservation, and possibly not quite in a sound mind, from the poison inhaled, protested. Now, I would propose that at future gatherings a committee be named to ventilate the rooms, as well as those to ventilate methods and ideas.

There was a little side-show for a few of us outsiders in the shape of a collation at the "Brunswick," sandwiched between the afternoon and evening meetings on Thursday. The toast-master was that genial and thoughtful spirit, Dr. L. D. Shepard (by the way, those initials ought to give him free admission to Canadian practice), who made us all feel at home. The Doctor evidently has the soft side of Father Time, as he has all the vigor of twenty years ago.

Between the courses various speakers were called upon for wit or wisdom. Chicago was there in the person of our old friend Harlan, who has broadened out in body as well as mind, doubtless preparing to do his part to occupy that annex to the city, or is the State that is largest? and impress his knowledge upon the savans at the coming Fair. It was a very pleasing sight to look upon all the happy faces and listen to the reminiscences of the gray heads. It was exceedingly gratifying to an old Boston boy, like myself, to hear her praises; and Dr. Rhein, New York, touched a responsive chord when he said that it made him a better man, and therefore a better dentist, to visit Boston and consider her history. And good things were said by others, and time went at lightningspeed till all too soon we left for the hall, compensated in part that we were to hear *our* Andrews. And among all those that helped to give pleasing

color to this Union I cannot forego saying a word in (Brackett) of him, of Newport, who always has such a kindly smile and whose presence is as a "Day in June." His grace of diction is a delight, and he never took part in discussion but he kept the attention of all. May we often meet and hear such as he.

The convention as an influence for good cannot be doubted; aside from the exhibit of professional skill and investigation, there is a golden thread that mingled with it all. The kindling eye, the hearty hand-clasp and considerate inquiry, the button-hole talk of old friends long parted, all told that the mercenary, for a time at least, had no place, but we "Brithers be and a' that."

Do not such unions add to our years, lend vigor to our frames, and give us a store of pleasant memories that shall make the after-glow of our closing days?

Odontological Society of Quebec.

By J. S. IBBOTSON, L.D.S.

The annual meeting was held in the rooms of the Medico-Chirurgical Society, Montreal, Oct. 8. E. B. Ibbotson in the chair. The President opened the meeting with a short address, recapitulating the work at the past year, and expressing regret that the attendance of the monthly meetings had not been larger. The retiring Secretary, Dr. F. A. Stevenson, had been very diligent in his labors, and it was a matter of regret that he could not accept any active office the present year.

The election of officers resulted as follows:—President, A. S. Brosseau; Vice-President, J. Lantier (Three Rivers); 2nd Vice-President, H. Berwick; Secretary, J. S. Ibbotson; Treasurer, P. Brown. Committee—J. H. Brazier, L. I. B. Leblanc, Geo. W. Throwsly, I. B. Vosbrugh, E. B. Ibbotson, C. H. Wells (Huntingdon), S. J. Andrews, F. B. Stevenson, J. Fitzpatrick.

Monthly meetings will be held during the winter.

Editorial.

Original Matter.

We are infinitely too modest to indulge in self-praise, but do not our Canadian subscribers appreciate the fact that, circumscribed as we are, this Journal has published in its two past volumes, mostly original matter, and with one or two exceptions, the production of Canadians? That is one of the chief objects of its existence—to develop latent talent in Canada. Brother Jonathan, as a dental contributor, is always full and generous; but we aim to waken dry bones in the Dominion, and we venture to believe we have succeeded. Fire away, Seven Provinces. We have lots of able men with pen as well as plugger, if they will only help. And a bi-monthly needs them now more than over.

Advertisers and Publishers.

The advertisements and the notices of new books should never be overlooked. Whether the reader may or may not want anything referred to under these heads, it is well to be posted. But progressive men can no more do without replenishing their stock of instruments and books than without new ideas.

Old Numbers of "Canada Journal of Dental Science."

If any of our readers have extra copies of Vols. 1, 2 and 3 of the *Canada Journal of Dental Science*, and do not want them, we would be glad to get them.

Death during Inhalation of Nitrous Oxide.

We are indebted to Dr. J. D. Thomas, of Philadelphia, for a personal account of the death of Mr. Cresswell, from apoplexy during the inhalation of nitrous oxide gas. There is, perhaps, no man in the profession who has more experience and ability in the administration of nitrous oxide than Dr. Thomas. Enjoying, as he does the confidence of his confreres in Philadelphia, among whom he

makes this department a specialty. During a conversation with the Doctor in his office a few months ago, we obtained full particulars of the death of Mr. Cresswell; and from the report of the inquest, it was clearly proven that in no way was the anæsthetic or the operator to blame. The fact is, every operator in the course of an honest practice is exposed to such coincidences, and we should be charitable in our judgments, not knowing when "Curses, like chickens, may come home to roost."

Prof. Garretson on Anæsthetics.

In Prof. Garretson's revised edition of his "Oral Surgery," there are two chapters (73rd and 76th) of more than ordinary value; the philosophical nature of which must make them classical in dental literature. The first chapter, entitled "Medical Diagnosis," is preliminary to the study of anæsthetics and anæsthesia, and appreciative of disease in general. A simple glance at the divisions will be suggestive:—Definition of disease; disease a generic term; foundation of diagnosis; ability to diagnose proportional with knowledge; study of diagnosis; suggestions in diagnosis; diagnosis a matter both of principle and detail; treatment founded on diagnosis. Physical condition—external and internal; surgical diagnosis; medical diagnosis; process of exclusion; consideration of common expressions. Diagnosis as applying to anæsthesia and anæsthetics—requirements of an anæsthetist; tripod of life; diseases of the heart and lungs. Physical diagnosis—differentiation between sounds in health and disease; rales or ronchi; pleural frictions; vocal fremitus and resonance; pathological conditions. The chapter on inflammation is a new addition to the work addressed solely to students, and embraces a careful discussion of the subject.

The chapter on anæsthetics is valuable as giving the opinions of an experienced surgeon. Prof. Garretson, referring to the idiosyncrasies, says that he has never yet met with a person who might not take ether, or ether in combination with chloroform, having administered ether under every possible variety of circumstances as to age, condition, time, etc. The depressing effect of fear on the heart's action is never to be lost sight of in the use of chloroform. The author recommends the inducement of a preliminary artificial

courage by means of a stimulant. Chloroform may be given in a sitting posture, unless there be a deficiency either in quality or in amount of the vital fluid. Excitement in chloroformization should be subdued by pushing the anæsthetic. Danger is, however, present ; let it not be overlooked. Chloroform is more treacherous than is Mephistopheles. The author declares his conviction that chloroform, "if one feel justified in using it, is far to be preferred in oral surgery to ether." Deaths occur "from a direct and unforeseen paralysis of the heart."

Discussing nitrous oxide, the author shows that fresh gas is to be accepted as being better than old. Spasm of the glottis and syncope are the commonest of interruptions. In both cases immediate attention is required to the tongue ; the organ to be seized with a dry napkin and drawn forward. In spasm, the placing of the tongue, combined with a few inhalations of air, is sufficient for relief. In syncope, place the patient in a reclining position, admit fresh air, dash water in the face, apply salts of ammonia fortior to the nose, blow into the ear. The conditions demanding caution are plethora hypertrophy, fatty degeneration and valvular obstruction of the heart, temporary or permanent systemic depression, as existing, the first in the over-fatigued, the second in drunkards.

Reviews.

Transactions of the New York Odontological Society, 1889. The S. S. White Co., 1890.

The S. S. White Co. have again produced a handsome volume of 208 pages ; the proceedings of a Society whose discussions are world-wide known in dental science. Dr. Bogue's paper on the visible changes that take place during the development of human teeth, and their alveoli, is a beautifully illustrated and classical paper.

Transactions of the American Dental Association, at Thirtieth Annual Session, 5th August, 1890. Publication Committee, DRS.

GEO. N. CUSHING, E. T. DARBY, E. NOYES. Chicago : H. D. Justi, the Dental Review Co., 1890. 209 pages, beautifully printed, and full to overflowing of the good things which our American cousins manage to spread for themselves every year.

The Micro-Organisms of the Mouth : the local and general diseases which are caused by them. By W. D. MILLER, D.D.S., M.D., Professor at the University of Berlin. With 128 illustrations, one chromo-lithographic and two photo-micrographic plates. Philadelphia : The S. S. White Dental Manufacturing Co., 1890. E. M. Renouf, Montreal, and any Toronto bookseller.

At last ! There is no sound reason why we should have been impatient to receive the English reprint of Prof. Miller's valuable work, issued in Leipzig, in 1889 ; but the knowledge that it was in existence in a foreign language for over a year sharpened English anxiety to possess it, and the White Dental Company is to be congratulated on "at last" giving us the most palatable professional literary treat of the season. It was our pleasure during the last year to review a number of important additions to our literature, each one of which occupies its special place ; but this work of Prof. Miller's fills a gap, to which the consensus of professional opinion unanimously elected him. In the preface the author states his position as follows : "It has been established beyond all question that myriads of micro-organisms are constantly present in the human mouth, and that these, under favorable circumstances, are capable of manifesting an action of the utmost significance upon the local as well as the general health of the patient. Not alone are they responsible for the vast majority of those diseases of the teeth and contiguous parts which the dental surgeon is called upon to treat, but they also give rise to other local and general disorders of the most serious nature.

"It has been my endeavor in the following pages to bring about a better understanding of the nature and extent of bacteritic growths in the human mouth, of the disastrous effects of which they are capable of producing, and accordingly, a more proper

appreciation of the importance of dental surgery and dental hygiene as a branch of general medicine."

We consider this work of such importance that we will review it more extensively in our next issue. In the meantime, it would pay our readers to purchase it, and spend the winter reviewing it for themselves.

Descriptive Anatomy of the Human Teeth. By G. V. BLACK, M.D., D.D.S. Published by The Wilmington Dental Manufacturing Co., 1413 Filbert Street, Philadelphia. \$2.50.

There is, perhaps, no more earnest and honest student of the science in our profession than the author of this timely work. He is distinguished for going to the root of everything he investigates, and this book is the result of defects he discovered, and which have been apparent to many observers, in the teaching of the details of the anatomy of the teeth, and in the systemization of the terms used in their description. The attempt to supply a systematized nomenclature of the several parts of the teeth in detail, similar to the fine work of Gray in his description of the bones, will revolutionize the teaching of dental anatomy in our colleges. It will make its study, perhaps, more difficult, but it will make it more perfect. Our American cousins are apt coiners of new phrases, and it has been frequently a great annoyance in dental literature over the border, that among much good verbal coinage there has been much counterfeit, and no sort of unity in nomenclature. Dr. Black has simplified as well as systematized the description of the teeth, and by aid of original illustrations, has pictorially expressed his propositions. In addition to the detailed naming of the hard parts of every tooth, the author has carefully described the anatomical characteristics of the pulp chambers of the teeth. The anatomical arrangement of the teeth, the alveolar process and alveoli, the periodontal membrane, and the gums are each in turn dissected and discussed. It is a genuine treat to study this work which, no doubt, will become a standard text-book of our colleges. The Wilmington Dental Manufacturing Co. have published it in very handsome form. No student can afford to be without it.

The Dental Laboratory. A Manual of Gold and Silver Plate Work, for Dental Substitutes, Crowns, etc., Regulating appliances for Irregular Teeth, Repairing, etc., to which is added Manipulations in Vulcanite and Celluloid, Laboratory Hints, Suggestions, Fixtures, etc. By THEO. F. CHUPEIN, D.D.S. Published by Johnson & Lund, 620 Race Street, Philadelphia.

However much we may claim to be professional men, no finished dentist can pretend to despise the purely mechanical in dentistry. Since the introduction of vulcanite—a boon to the poor, but a degradation to the higher art in mechanical dentistry—mechanical education has deteriorated, and while we have thousands of mechanics, we have hundreds of botches. Nothing, perhaps, has helped more to fatten the conceit of the average junior dentist than the fact, that because he can run up a set of vulcanite he imagines his laboratory education is complete. The constant practical work in the laboratory ought not to go unattended with the study of theory, and we know nothing in our literature so likely to be useful in that line, as well as in directly teaching practical ideas, as this capital work of Dr. Chupein's. Its author should have given us an index; but from start to finish it deserves to be so thoroughly studied, that the student will have an index in his own memory,

1. *Progressive Exercises in Practical Chemistry.* By LAFFMAN & BEAIN. Illustrated.
2. *Quiz' Compend of Anatomy.* By DR. SAM'L. O. C. POTTER. Fifth edition.
3. *The Latin Grammar of Pharmacy and Medicine.* By D. K. ROBINSON, Ph.D., with introductions by L. E. SAYRE, Ph.G. Philadelphia: P. Blackiston, Son & Co. Montreal: Wm. Drysdale & Co., 232 St. James' Street, 1890.

Three very useful books for students.

1. Is intended to encourage the study of laboratory work in chemical principles, giving not only illustrated ideas of the apparatus and manipulations, but the general chemical principles and

exercises in important elements, etc., etc. Any student can thoroughly enjoy following the progressive suggestions embodied in this little book.

2. This compend is an established success. It has 117 engravings. It is concise and clear. It is invaluable to students.

3. A unique addition to elementary works for students in pharmacy or medicine. It is not intended to supplant school study of Latin, but to co-operate with the studies of pharmacy and medicine, the declensions, verbs, etc., bearing directly upon the special professional knowledge the student aspires to reach. For instance, in the declension of nouns, the old familiar "*penna*, a pen ; *pennæ*, of a pen ;" is replaced by "*pilula*, a pill ; *pilulæ*, of a pill." Among the exercises : (1) "Name the ingredients in the tincture of capsicum ? (2) I don't know. (3) Is there any one present who knows ? (4) There is a certain boy present who remembers. (5) He is the same boy who told us yesterday about the tincture of aconite," etc. The Latin-English vocabulary embraces the terms and words used.

Dental Review, November 15.—Dr. Thompson draws attention to the value of the study of comparative anatomy to dentists, recognizing that the comparative method in any study is the only scientific method. There must be breadth as well as depth of knowledge, and to insure breadth, a given branch must be compared with collateral branches. Dr. Semms pleads for use of gold fillings with a layer of amalgam at the *cervical* margin. A matrix is necessary and should be narrow, but little wider than sufficient to cover the meeting-place of the two materials. Having cavity ready, matrix firmly fixed in place, and instruments selected, prepare the amalgam quite dry. Place a small quantity against the cervical margin and burnish well, then another small piece *lightly* packed upon the first, as gold does not readily unite with a burnished surface. Now quickly condense a piece of Williams' crystalloid gold upon the amalgam until the gold color is lost, and follow with more until the mercury ceases to show, when the filling can be finished with any form of gold desired ; but *don't* smear the amalgam over the matrix into the cavity, or your filling is spoiled.

In packing amalgam a well-fitting and immovably fixed matrix should be used ; the material packed with strong rotary motion or with the mallet, and matrix left in place until the filling is fairly hard.

At the first District Society New York fall meeting Dr. Atkinson referred to the new pus-killer, Pyoktanin. There are two colors, purple and brown. Every dead animal will reveal plainly which color killed him. They will either have the blues or the yellows. As usual with all new remedies, this has its enthusiastic advocates, who rush to conclusions not justified by the limited time for experiment. Perhaps it is the *ultima thule*, and perhaps it isn't. Time will tell.

The increase in the cost of platina has been greatly affected by electric lights. No substitute for it has been found. Five years ago it was worth \$6 an ounce. It is now gone up to \$20. It has been discovered in New Granada, San Domingo, California, Borneo, and in portions of Canada.

Dr. Gay recommends as a root-dryer ordinary copper wire in three coils upon a metal point, cone socket or other, in a wooden handle and drawn out into a point. Apply first some antiseptic oil to the root canal and vaporize them with the dryer. Anneal the copper wire thoroughly. Take an instrument of the desired size to hold the point, allow two and a half inches for the point, and then coil around the instrument until the desired size is reached, then coil back to the point again, and then over again to the end. Retain this end in place with silver solder. The copper wire each time it is used is annealed and always remains flexible.

Western Dental Journal, October.—A young woman has died at Lille from the effects of cocaine injected into her gums by a dentist. To match shades of teeth at night view them, for comparison, through the flame of a gas burner or lamp, and it will be found that all the varying shades become plainly perceptible. The Editor writes of the dangers of anæsthesia as follows: "There are conditions rendering general anæsthesia dangerous, and the practitioner, whether medical or dental, should be well assured before administering ether or chloroform that none of these are present. They are fatty degeneration of the heart, valvular lesions, kidney

disease, brain tumors, respiratory obstructions from enlarged tonsils, thoracic tumors or aneurism and chronic alcoholism. An anæsthetic should never be administered on a full stomach, as sickness would likely follow that would interfere with the operation, and anæsthesia of the glottis prevent the expulsion of vomited matter in case it enters the larynx by regurgitation; neither should it be given after long fasting, as an absence of nutrition would tend towards cardiac paralysis; excitement should be avoided, instruments should be kept out of sight, and too many spectators should not be present. A painful operation should not be commenced before the stage of complete anæsthesia is reached, or it may cause death from shock, as the result of peripheral irritation.

International Dental Journal, November.—Dr. Bryan approving of the combination filling of gold and amalgam, is not in favor of a matrix which requires screws, wrenches, threads and clamps. The ideal matrix should consist of a simple ring, so thin as to pass readily between the most crowded teeth, flexible and springy, not liable to stretch when force is applied to it. He recommends the steel used by clock-makers for the support of pendulums, gauge six-one-hundreths millimetre, equal to twenty-three-ten-thousandths inch. A mandrel similar to that on which jewellers measure rings, but smaller, is a necessity.

Dr. I. Morgan Howe's paper. "What is the essential basis of professional ethics, and the proper relation of trade?" covers questions of morality in professional life, the relation of business and trade, of dental manufacturers and dealers to patents. Some very acrimonious discussion occurred last year on these subjects over the border. "Many dental manufacturers claim a certain sort of professional standing because they have been dental practitioners, or hold diplomas. They attend society meetings and clinics to show their wares in a quasi-professional way, and not unfrequently read papers and perform clinics with more or less business suggestions." Altogether the article is almost an exact echo of an editorial in No. 18, Vol. IV., of the *Canada Journal of Dental Science*, and for which we received, at the time, considerable criticism from journals published by depots. Every one must, however, recognize the fact that the depots are conducted like any other commercial

interest, purely for money-making purposes, and that they are, as a rule, quite as obliging to their customers as other commercial concerns. It is not always possible, however desirable, to introduce professional ethics into the commercial atmosphere, and the question occurs, "Were professional men to give up practice and enter into purely commercial interests, would they not consult their immediate instead of their past position? would they not do the best they could to make money as manufacturers, without remembering their feeling when they were practitioners?" As to the tricks and devices of trade, and the relation of societies, journals, etc., to business concerns, we see little prospect of reformation, except by absolutely refusing manufacturers any society privileges, and treating them as very disagreeable necessities, which may be patronized at a distance, but carefully ignored in society meetings. The profession would then be the chief losers. It is a question difficult as well as delicate to discuss.

Dr. Bruce, of Melbourne, Australia, spent a short time with Dr. Herbst, and gives a description of the Herbst method of filling with glass, which, however, cannot compare with the porcelain work introduced by Dr. Land, of Detroit, and brought to Canada by Dr. Hipkins, of Toronto.

In the Report of the American Dental Association, August 5th, Dr. Pierce states that there are thirty-three dental colleges in the United States. The number of graduates during the past six years was 3,605. Dr. Pierce, speaking of the rapid multiplication of dental schools in the United States, said it "involved a question which is menacing the future prosperity of the dental profession. The results in all probability will be similar to the results attained by the medical schools of this country, which turn out annually to prey on an unsuspecting public, a number of men which largely exceeds the number of graduates in Great Britain, France, Germany, Italy and Austria combined! This has been carried to such an extent that the medical graduate of the United States is the laughing stock of his transatlantic *confere*. One out of every six hundred in the United States is a medical graduate!"

A good deal of space is given to the banquet to Prof. W. D. Miller—a worthy testimonial to a worthy brother. The editor, Dr. Jas. Truman, has put his heart, head and hand into the Journal.

Dental Cosmos, November.—The Editor reprints from the "American System of Dentistry," his interesting monograph on "diseases incident to the first dentition." A finely illustrated article on the correction of irregularities, by Dr. Jackson, of New York. Dr. Milton writing on obtunding sensitive dentine, advocates the introduction of oil of cloves into the valve of the hot-air syringe, placing it over the lamp, and thus vaporizing the oil, and blowing it into the cavity being prepared for filling. Remove the oil from the cavity with alcohol. The peripheral tubuli and contents become embalmed. In all cases of inflamed and aching pulps the vapor of chloroform gives immediate relief. After extracting a tooth having an abscess, the same vapor blown into the socket gives relief. In removing calculus, the same vapor is useful. The monthly bibliography of dental literature continues to be a most interesting feature of the *Cosmos*.

Dental Record, London, Eng., November.—A case of alleged swallowing of artificial teeth is reported, the plate consisting of a complete upper set. The patient, who evidently had a lively imagination, began to suffer from dull aching pain in the umbilical region. The pain persisted; food could only be taken in small quantities. There was obstinate constipation, and the patient lost flesh. Sleep was only obtained by opiates. Vomiting occurred about ten minutes after food. The suffering increased. Laparotomy was performed; the abdomen was opened by median incision above the umbilicus. The pylorus was found perfectly normal, no foreign body could be detected. The surgeon attributed all the subjective and objective symptoms to the domination of a great fear, of which the operation relieved him. This seems a rather far-fetched excuse for the operation. Any fool ought to be made to understand that a full upper set could not be swallowed, and if a fool persists in believing he actually did swallow such a set, he ought to be fooled out of it in some other way than by a surgical operation. If a fool worried himself into illness under the belief that his skull had no brains in it, would you trephine it to give him proof? The editor puts in a plea for ambidexterity in dentistry. A correspondent discussing the ethical question of dealing with another man's patients, makes several good points. A

lady presents herself, an old tooth having given way. D. P. Q.—“Very bad work ; this filling also very roughly done ; this one abominable,” and so on. Patient only replied, “Will you kindly attend to the broken-down tooth first.” This finished, paid her guinea, and went to her family dentist when she returned home, who found everything in order. Patient, to his surprise, renewed the request for a careful inspection. Dentist of excellent and deserved repute, assured her that everything was in perfect order ; and then the patient related how this usurious “brother” wanted to remove all his fillings in order to make money, knowing that he could only do this by first ruining the reputation of a highly respected practitioner. The writer quotes instances of dishonorable and unprofessional dealings in this way with other men’s patients that can be paralleled in Canada.

Items of Interest, November.—Succeeds each month in crowding in a lot of useful items about all sorts of things from all sorts of sources, mostly extracts from all the journals. Dr. J. C. Story says there is an inconsistency in a State granting a charter to a dental college, embodying the power to graduate students and confer the degree of D.D.S. ; and then, in the very face of this Act, pass another authorizing the appointment of a dental examining board by the governor or a district judge, whose duty it is to pass on the qualification of all who desire to practise dentistry. This board may be composed wholly, or in part, of men who never saw inside of a college, and who are as innocent of the great fundamental principles which underlie the science of medicine, as ignorance well can be.

Platina.—Many suppose the termination of this word should be *um* instead of *a*. This is a mistake. It is a Spanish name, meaning small silver, and not a Latin word, which would be indicated by *um*.

Odontographic Journal, October.—The visit of Dr. W. D. Miller, of Berlin, to the United States is duly honored by our genial friend, the editor, Dr. J. Edward Line. Dr. W. C. Barrett tendered Dr. Miller a reception at his residence in Buffalo, inviting medical

gentlemen, microscopists, pharmacists and dentists—a thoroughly representative body. We regret that Dr. Miller had to leave Canada out in the cold, but Canadian dentists warm to him all the same, and claim a proprietary right to honor one who has done so much for the profession of two continents.

Archives of Dentistry, November.—*Impressions* of the mouth for full or partial dentures should always be taken in plaster. Where difficulties arise, as they often do in partial cases, Dr. Angles' plan is unique in its simplicity, viz.: Oil the impression cup before pouring the plaster, in order to facilitate the removal of the former from the latter; then divide the outer portion of the impression into three pieces, when the whole can be easily removed and replaced in the cup.

Moustaches.—If you have ever been exasperated by a heavy moustache obstructing your view of the lingual aspect of the oral teeth, while endeavoring to remove deposits of calculus, a piece of rubber drawn over the lip and held back in the usual manner will make you happy.

Suspicion is being aroused that some of the State Boards are antagonistic to some dental colleges. This is freely expressed with reference to the California Board, whose influence has been decidedly opposed to the State Dental College.

Dr. Ivory, formerly of Toronto, Ontario, is making a good reputation as an inventor. His broaches are very useful. They are made of very thin steel, finely tempered, and twisted so as to form a corkscrew; they are fine enough to enter the smallest root canal; cotton can be wrapped on them, and will not remain in the canal, but can be easily removed from the broach by a reverse turn of the instrument.

Dark stains on the teeth.—Add a drop or two of aromatic sulphuric acid to your paste of pumice and water. Use with soft rubber disk. Floss silk with this is effective to remove stains between the teeth.

Dental Office and Laboratory, November.—Dr. Theo. F. Chupein continues his interesting articles on operative dentistry, and leading

questions and answers for dental students. An extract from the *Cosmos* on securing immediate suction in dentures escaped our notice. It is an old idea, as we remember the late Dr. C. M. Dickinson, of Montreal, using it. The plate is moistened, and then simply sprinkled with fine powder of gum tragacanth. The plate is then pressed into place. It will, bad or good fit, hold firmly for a day. As an assistant with troublesome patients, it is capital.

British Journal of Dental Science, November 1.—Mr. Colyer illustrates the various methods of introducing gold fillings. Dr. Roughton publishes a very interesting paper on the "Early diagnosis of surgical affections of the mouth," in which he draws attention to some of the commoner affections of the parts near the teeth. A great responsibility rests upon the dental surgeon, by recognizing early cases of malignant disease of the mouth before they are a cause of much trouble, he may by advising suitable and adequate treatment justly claim to have diverted his patient's steps from a road leading to death. Cancer of the tongue may begin in a very trifling deviation from the natural, to which the name "precancerous" has been applied. Under twenty-five or thirty years of age it is very rare. Over forty, it is well to remember that any sore place on the tongue, if continually irritated, is extremely likely to become cancerous. One of the commonest conditions is an abrasion, or small ulcer at side of tongue, produced by rubbing of a ragged tooth, or a badly fitting plate. If it remains untreated and be constantly chafed, it will increase; sooner or later will become indurated, so that when the finger is lightly passed over it, it will give the sensation of an actual little lump on the tongue. The surface of the ulcer will become foul and sloughy-looking, being devoid of granulations and exuding a thin discharge with a very offensive odor. When the sore has reached this stage it is cancerous. The next precancerous condition is leukoplakia, produced by excessive smoking; very easy to diagnose, presenting a silvery white coating over more or less of front part of tongue. As to syphilis of the mouth, dentists may recognize it before the patient knows it. It is possible for dentists to convey syphilis from one patient to another by means of imperfectly cleaned instruments. Dentists should be particular to cleanse and

disinfect extracting and other instruments. Epithelioma, beginning in the socket of a tooth—in these cases the patient, as a rule, will not complain that he suffers from a tumour or growth of any kind, but will seek relief on account of toothache or looseness of the teeth. A careless or ignorant dentist will simply extract; a well-educated one will insist upon patient submitting to prompt surgical treatment. Dr. Barnes thinks that copper amalgam would give more satisfaction if it had less mercury. Mercury should not be added to the amalgam to insure its plasticity. Heat until the mercury is thoroughly expressed. Do not be afraid of burning it, as overheating seems good for it.

Journal of the British Dental Association, October.—The Annual General Meeting of the Association held in Exeter was very successful. We can only make a few extracts from the continuation in the October issue of the *Journal of the proceedings*. In the discussion on "Crown Bar and Bridge work," Mr. Lennox prefers an English plate-tooth to any all-porcelain crowns. A better case can be made with a plate-tooth than with all-porcelain crowns, with the additional advantage that the backing of the plate-tooth can be used as an abutment for a bridge, when an all-porcelain tooth is useless. Mr. Lennox spoke highly of the ingenious method of Mr. Gartrell of inserting a removable bridge; objects to hacking good teeth to get abutments; better to use a plate. Mr. Cunningham believed that where it was possible, removable work was better than fixed. Dr. W. C. Barrett felt confident that the evil which had been done by an extreme adoption of bridge work far exceeded the good; did not condemn bridge work. Crown work he believed to be extremely useful. Foundation of the whole process was the correct treatment of the root. While the dentists of the United States claimed to be in front in regard to the practical work of operative dentistry, in much of the mechanical work they were far behind.

At the Annual Meeting of the Central Counties Branch, the President, in his address, referred to the progress of the profession. No science, or art, or industry has, within the last thirty years, afforded more relief to the suffering than dentistry. It is only just

and fair to our American cousins that they should receive a large share of the credit for this happy state of things, and I believe every dentist thanks America for the help she has given us in the development of our knowledge, and for the numerous inventions she has given us to help us in our work. At the same time we must not forget how much credit is also due to our brothers in England.

Among the original communications, Mr. J. Howard Mummery's valuable paper "On the Agency of Micro-Organisms in caries of the Teeth," is continued; a paper by Dr. Geo. Cunningham on "A Method of adding Gum to ordinary Artificial Teeth," which, however, is not entirely new to this country. Deaths are reported during the administration of methylene bichloride, of chloroform; a case of death following an injection of cocaine—a gramme of twenty per cent. solution injected into the urethra.

British Journal of Dental Science, October 15.—Mr. Linnell writes favorably of "Immediate Torsion" of a tooth into its right position in the dental arch, having performed it from the seventh to the fourteenth year. Mr. Tomes records a case in which he successfully operated at the age of fifteen. [Reference to page 1, No. 1, volume I., of this JOURNAL will show an illustrated case successfully performed at the eighteenth year]. It can only be undertaken in cases in which an upper lateral or central incisor is standing rotated on its axis. Ascertain if there will be room for the crown when it is turned by taking a model, cutting off the misplaced tooth and placing it in the position you wish it to occupy when twisted. The apex of the fang remains nearly fixed while the crown will move in an arc of a circle; so that if we find the root points in an abnormal direction, we would not gain a very satisfactory result. Curved roots preclude torsion. Wrap blades of forceps with lead foil, turn slowly; having the tooth in the position you wish it to occupy, make patient bite into gutta percha; this forms a good splint, to be worn for twenty-four or forty-eight hours, removing at meal times. Paint gum with aconite and iodine.

Dental Review, October 15.—This is a splendid issue—quite a remarkable one. A report of the whole of the scientific work of the last meeting of the American Dental Association occupies the bulk of the number. Dr. Dickinson's lecture, "Reflex Neurosis with which the teeth are associated," is in the same direction as that dealt with by Dr. Brubaker in the "American System of Dentistry." He draws attention to the mistakes liable in diagnosis where pain is reflected from the teeth to the brain, the ear, the stomach, etc., as well as to reflected pain in the teeth in affections of near or remote organs. The editor insists upon the importance of thoroughly drying root canals before filling. Desiccation is best secured, perhaps, by electrical assistance. Alcohol and chloroform, or glycerine cannot be relied upon without the further aid of heat or hot blasts from syringes. If root-drying is faithfully performed, there will be fewer cases of pericemental inflammation and still fewer of abscess following the filling of roots.

From the *Memoranda* we extract the following: The new dental law of Italy requires that a dental student should be a Bachelor of Arts and Doctor of Medicine, before he can become a dentist. Two hundred dentists are practising illegally in Philadelphia. Peroxide of hydrogen in pound bottles deteriorates after one-half or two-thirds is used, and is useless for treatment of pulpless teeth and abscesses. Use it then, mixed with pumice-stone, for cleaning teeth, with engine points. The acid reaction, which has taken place, together with the traces of oxygen remaining, make it excellent for this purpose.

From a series of experiments made in Professor Botkin's laboratory, in St. Petersburg, Dr. S. Klikowitsch (*Virchow's Archives*, xliv. 2), draws the following conclusions:—

1. Nitrous oxide gas is incapable of supporting respiration in animals and plants, and, like other different gases, leads to death from asphyxia. The asphyxia produced by this gas, however, presents points of contrast to the asphyxia produced by other means.

2. Nitrous oxide gas produces no chemical or morphological changes in the blood of animals, but is dissolved in it, and again eliminated, according to physical laws, without apparently being broken up into nitrogen and oxygen.

3. Anæsthesia with laughing gas is so closely associated with insufficient oxidation of the blood that it cannot be regarded as absolutely without danger, especially in diseases of the heart, lungs or blood-vessels.

4. The association of laughing gas with twenty per cent. of oxygen completely removes the possibility of asphyxia, and produces a number of results capable of therapeutic application.

5. Under the influence of the mixture of laughing gas and twenty per cent. of oxygen, in the majority of healthy subjects, the heart's pulsations are increased, the pulse-wave diminished, and the respiratory movements decreased in number and increased in depth; these effects pass off in from three to five minutes.

6. In six cases of weak heart action the above gaseous mixture produced no unfavorable results; on the other hand, the pulse was decreased in frequency and increased in strength. These effects lasted from one to two hours.

7. In cases of disturbed respiratory innervation the mixture of laughing gas and oxygen regulated the respiratory rhythm, and rapidly removed the subjective and objective signs of insufficient oxidation of the blood.

Dr. Miller, of Berlin, says the idea is fallacious that the combination of tin and gold is antiseptic, and that the supposition that it destroys micro-organisms by galvanic action is unscientific and unsound. It is a well-known fact that strong currents of electricity are required to exert any marked action upon the development of bacteria. An ox might be killed by a shock of electricity without doing any harm to the bacteria that might be in him.

The Physician's Visiting List (Lindsay & Blakiston's) for the new year, 1891, just to hand.

Strength, compactness, convenience and durability are the essential qualities which a good Visiting List should possess to resist the unusual hard wear it receives. These qualities are all combined in Lindsay & Blakiston's Physician's Visiting List, which has now been published for forty years. It is the most convenient for the pocket, and its contents are arranged in the most advantageous way, including many useful tables and specific information.

The November number of *The Old Homestead*, a literary and domestic monthly, published by Davis Bros., Savannah, Ga., U.S.A., is now ready. It contains forty large pages of original stories, sketches, poems, essays, etc. Its household department, handsomely illustrated fashion pages, children's corner, select music, and premium list, together with its complete and serial stories, make the publication eagerly sought by people of all nationalities and sections. There is not one line in its columns that will offend delicate tastes, and the matter throughout is carefully freed from sensational effects. The subscription price, unlike the costly magazines, is very low, being only \$1 a year. Send for sample copy, free. Davis Bros., publishers, Savannah, Ga., U.S.A.

Disinfect your instruments in a five per cent. solution of carbolic acid, or oil of eucalyptus.

Campho-Phenique should never be mixed with water or glycerine. It will mix in all proportions with alcohol, ether, chloroform, and all fatty substances. In dentistry it will seldom be necessary to dilute it.

To make gutta percha adhere perfectly to the walls of a cavity, wipe out first with a pellet of cotton moistened with copal ether varnish or with chloroform.

Dr. Green, of New Albany, suggests that in setting porcelain inlays in cement, the piece of tooth be made as hot as can be held in the fingers before pressing home in the cement. The cement will set much harder.

Ash's Quarterly Circular, published by C. Ash & Sons, London, England, is a well-arranged condensation of useful articles from the journals.

Interesting Notice.

The next number will contain a portrait of Dr. W. D. Miller, Berlin, and a sketch by his friend and ours, Dr. W. C. Barrett, of Buffalo, N.Y. This will be the first time Dr. Miller's portrait has been published in a dental journal. It will alone be worth the subscription, and will be sent only to subscribers.





Very truly yours
W. D. Miller

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No. 2.

Original Communications.

W. D. Miller, A.B., Ph.D., M.D., D.D.S.

By W. C. BARRETT, M.D., Buffalo, N. Y.

It is but natural that men should be anxious to know something of the personality of those with whose names they are familiar. Dr. Miller, or Professor-Doctor, as he is called in Germany, has occupied so much of the attention of the medical and dental world for the past few years, that it is quite a legitimate curiosity that prompts men continually to write letters asking about his age, history and general appearance, and I willingly acquiesce in the request of the Editor of this JOURNAL, that I should write a brief sketch of his life. Let me premise, however, that the subject of this article is not to be held responsible for anything which it contains. As he is not present to be consulted, it is quite possible that I may fall into some errors of fact, while it is very certain that he would, on yet other grounds, strike out much of what I shall probably say.

If any man imagines that it is by an innate genius, an intuitive knowledge that Dr. Miller has accomplished so much, let me say to him that he may dismiss that thought from his mind. I believe that which we call genius to be but a great capacity for work, and in this sense, perhaps, Dr. Miller is gifted above most men. There is such a thing as talent, a kind of natural adaptation to a particular employment, an aptitude for a special work, but beyond this it

is hard labor that engenders results. In this sense Dr. Miller possesses talent of a high order, for he has accomplished what few men have done, mainly because he has worked as few men have worked. He is a most indefatigable student, and almost regrets the hours that are spent away from his laboratory and books.

He has, at times, seriously jeopardized his health by his intense application, for he has not the appearance of a robust man. Yet there is stamina in him, or he could not successfully have labored as he has. In height he is, perhaps, five feet nine inches, and his weight may be 150 pounds. He has a large professional practice to conduct, besides his professorial, his laboratory and his literary work. The latter is by no means confined to his English writing, for Dr. Miller is conversant with several languages. German, especially, is as familiar to him as his native tongue, and he not only speaks and writes it fluently, but he has a technical knowledge of it, and his contributions to German periodicals are frequent and important. He has probably published more in that language than in English.

Willoughby D. Miller was born near Alexandria, Licking Co., Ohio, August 1st, 1853. The first twelve years of his life were spent upon a farm, and it is to that fortunate circumstance he owes his physical capacity for work. It is from the farm-house that the healthiest and most stalwart American minds have emerged. The pure air, the active exercise, and the intimate communion with nature, often develop a mentality which possesses a grasp and power unknown to the overstimulated youth of cities and large towns.

At twelve years of age young Miller could swing an axe or wield a hoe as well as the average workman. In 1865, with his family, he moved to Newark, Ohio, and in 1871 graduated from the High School at that place. He then matriculated with the University of Michigan, at Ann Arbor, graduating as Bachelor of Arts in 1875. In the autumn of that year he went to Edinburgh, Scotland, where he went through a special course of chemistry, natural philosophy and applied mathematics. From there he went to Berlin, pursuing the same line of study, having in view the profession of a mining engineer. But in 1877 he became seriously ill, through over-application, and was forced to suspend his studies for a time.

At that period Dr. F. P. Abbot, so well known in the dental world, was a leader in the so-called "American Colony" in Berlin, and had his regular reception days for American visitors. He had married the daughter of the American Minister to Germany, and this, with his own talent and merit, had given him a high standing in German, as well as American circles. During the convalescence of Miller, he naturally drifted into this charming atmosphere, which was made yet more enchanting by the lovely daughter of Dr. Abbot. Both father and daughter became interested in the young student, and Dr. Abbot submitted to his chemical knowledge a number of professional problems, one of which was the action of tin and gold upon each other, when combined in the filling of a tooth.

This period was the turning-point in the life of Miller. The influences then at work changed the whole current of his future, and gave to dentistry the man who has done more for its scientific advancement than any other; and it is only fair that we should know to what chain of circumstances we are indebted for our present comprehension of the etiology of dental caries. There is little doubt that dentistry owes more to Miss Abbot than to any other woman. The tale of Miller's selection of dental practice as an avocation has been told in this wise, and while neither of the parties of the first part have ever confirmed it, I do not know that they have ever given it a denial. Of course, it is a purely domestic matter of their own, but as the story is not new, perhaps a repetition of it will not seriously offend any of the proprieties.

The affinity between the two young people became so unmistakable, that Miller went to the father and proposed a union, and received a decided negation. Dr. Abbot gave him to understand that he could not spare his daughter. Living as he was in a strange country, he could not have his family circle broken up, and his only daughter taken away to America. Such a separation would be too painful for him even to consider. There was contemplation and consultation on the part of the young people, and Miller went a second time to the father, and said: "Do I understand that you have no *personal* objection to me?" Dr. Abbot answered that he knew of no one to whom he would more gladly give his daughter, were it not that Miller's aims in life and his contemplated profession would take him back to America, and thus

cause a breaking-up of family ties, to which he could not give his consent.

More contemplation and more consultation resulted in Miller's going a third time to Dr. Abbot, and asking to be taken as a dental student. He gave up his previous plans in life, adopted dentistry, resolved to settle in Berlin, and then commenced a career which has proved so successful and honorable. Not only has the public and professional issue justified his choice, but from a domestic stand-point the result has been all that he could have hoped. No hearth-stone was ever laid more happily, or maintained in greater mutual felicity, than that of W. D. Miller. Two children, a boy and a girl, surround it; the one as studious and as earnest as the father, the other as lovely and as amiable as the mother, and they bid fair to perpetuate the virtues of both.

In the autumn of 1877, Miller returned to America, taking his first course in dentistry in the Pennsylvania Dental College, and graduating in the Dental Department of the University of Pennsylvania, in 1879. He immediately returned to Berlin and entered upon practice with Dr. Abbot, at the same time continuing his studies in medicine, and commencing with the renowned Koch a course in bacteriology.

It was during this period that I first met Dr. Miller, at a meeting of the American Dental Society of Europe, in Wiesbaden, Germany, in 1881. At that time he read what was, I believe, his first paper before a Dental Society. It was upon the chemistry of dental caries. I was very much struck with the technical accuracy and clearness of his statements, which were so different from the glittering, yet uncertain generalities to which I had been accustomed to listen in the consideration of this theme. His experiments, too, instead of being merely empirical and desultory, were conducted in a genuinely scientific manner, and this was a revelation to me. I had read of many a tentative series, but none had positively proved anything, because all had left too many loop-holes for error, and none had been conducted strictly in accordance with scientific law.

I admired the scientist and liked the man, and we became rather intimate, for so brief an acquaintance. We drove about the country together, and in his carriage went to Schlangenbad, to visit Dr. Abbot, who was taking a course of the baths at that

place. When I returned to America, Dr. Miller and I became and have remained frequent correspondents.

When I became the Editor of *The Independent Practitioner*, Dr. Miller was just entering upon the series of observations and exhaustive experiments that have made his name a household word wherever scientific medicine or dentistry are known, and I, from my knowledge of the man and his work, comprehending what his experiments were and to what they were tending, asked him to write for that journal. He answered by asking me to become a kind of mouthpiece for him in America, for he was more anxious to be known here than in Germany. Of course, I seized the offer with avidity, and he began that famous series of papers, perhaps the most valuable and far-reaching in their results of any ever published by a dental journal.

At first, Dr. Miller's views were determinedly fought, for they were in direct opposition to everything then believed. But his experience was unanswerable, and soon the best men who were examining the question, found that his arguments, and more especially his demonstrations, were irrefutable. The Germans were forced to accept his views; England followed; France was a little slower, and America finally awakened to the fact that she had furnished to the world the man who had solved the problem which had been the professional question of the ages.

There are few who even now know the extent of his observations and the value of his discoveries. For instance, there was for a long time a great difference of opinion as to whether micro-organisms, were the cause or the product of pathological changes, and simple as the matter now seems, it could not then be solved beyond the question of a doubt or a quibble. Miller began his experiments in producing artificial caries, accomplished it perfectly, and settled the matter for all time, in medicine as well as in dentistry. Outside the human body, where no pathological factor could enter, by pure cultivations of a specific bacterium, he obtained a product identical with that within the body. In other words, he produced structural changes in a solid tissue, under circumstances which forbade the possibility of function having anything to do with it. This alone was enough to have given him immortality among a truly scientific people. There are other great questions which he has determined, and for which the world will give him due credit

when they are fully comprehended. That he discovered the true nature of dental caries, and established it in the face of all the brilliant and able men who had long held conflicting views, is, of course, known to all.

His writings soon engaged the attention of the scientific world. I remember about this time receiving a letter from President Angell, of the University of Michigan, from which Miller first graduated, making inquiries as to the exact work which he had accomplished, and soon thereafter the Honorary Degree of Doctor of Philosophy was conferred upon him by his Alma Mater.

But before this, in 1884, he had been repeatedly urged to accept a professorship in the new German Dental Institute, and in the fall of that year Dr. Miller acquiesced, and received the title of "Royal Professor" in the University of Berlin, an honor never before conferred upon a foreigner. In Germany this title means something, for there a man is not self-appointed, nor is the place virtually purchased by subscribing for shares in some college scheme. A professorship there is a position conferred by Government, and it is only given to men of acknowledged standing. Dr. Miller was also promised an extraordinary professorship in the Medical Faculty of the University, but it was required of him subsequently that he should become a naturalized German, and this he declined, for he would not give up his American citizenship for any position whatever.

Prof. Miller had been steadily pursuing his medical studies, and in 1887 he came up for the "Rigorosum," the most exhaustive of all the examinations. He passed it with the predicate of "*Magna cum Lauda*," and a record of fourteen out of a possible fifteen. This latter number is practically never reached, the highest in Miller's year, aside from his record, being eight. This brilliant examination established him firmly in the German University. Previous to that he had been bitterly opposed by German dentists, who have a jealousy of Americans, and they had repeatedly sent petitions to the Minister of Education asking that Prof. Miller's services be dispensed with, and a German appointed in his stead, for he has never hesitated to proclaim his Americanism at all times and in all places. All opposition to him seems now silenced in Germany. Indeed, the German journals seem to evince pride in his attainments, and the editor of a prominent one lately

declared his the brightest name known to dentistry. * He places him above all his contemporaries, and suggests calling the ninth decade of the century "The Miller Decade."

Wherever Prof. Dr. Miller now goes he is the recipient of distinguished honor. Last summer I was his guest in Berlin, and asked him to give me an account of the special distinctions that had been conferred upon him in Germany and elsewhere. In answer, he dug out from an old chest an armful of diplomas, each of which represented some distinction coveted by most men. Last autumn he made a brief visit to America, and wherever he went he was eagerly received and honored by professional admirers. He made Buffalo a visit, and every dentist and physician was anxious to meet him. It was the same in the very few other cities which he visited, and when on his way home he stopped in London, he was entertained by the best there, a grand dinner being given in his honor. Yet these are things which he never seeks, for he is not at all a self-assertive man in his manner. If you learn anything of a special honor which has been conferred upon him, it will not usually be from himself.

What has he accomplished? It is difficult to give an adequate idea within the limits of such an article as this. Before he commenced his studies, there was no accepted theory of caries. As many separate opinions were held as there were individual thinkers and experimenters; the most absurd views were advanced, for a majority of the writers had started out with a preconceived hypothesis, to which they endeavored to make the facts conform. Miller went to work the other way. He began his experiments without a theory, deducing that from his observations. It was, in brief, this;—

Dental caries is primarily produced by an acid, which is the product of a ferment organism. Fermentation in the mouth does not essentially differ from that out of it; but one of the by-products of that process is this acid, which Miller demonstrated to be identical with lactic acid. This, being produced in immediate contact with tooth tissue, dissolves the calcareous portion, thus forming a pocket in which fermentation proceeds with increased vigor. The inorganic elements of the tooth being first dissolved out, the organic portions are destroyed by yet other organisms, and thus decay proceeds.

It will be seen that some of the causes previously urged are shown to be secondary factors in decay. Thus, the chemists had declared that it was a chemical solution. Miller shows this to be a fact; but the acids are organic acids, produced in the mouth by fermentative organisms.

They had declared that these acids were of sufficient power to dissolve tooth tissue, because they were in an inchoate or nascent condition; and this Miller showed to be true, but in a manner quite different from what the chemists imagined.

Some had declared caries to be an inflammatory process. Miller showed that while this was an error, there was yet some foundation for the assertion.

Every intelligent dentist who has been in practice a few years, will remember how, in dental meetings, we formerly debated this question of etiology, and how anxious we were to solve the problem. We felt it a professional disgrace that we did not know the pathology of decay. We wrangled and disputed, and each urged his peculiar views with the greater pertinacity, because he could not incontestably demonstrate them. There is nothing of this now. All clamor is hushed, and there is not a tongue to wag against what Miller has proved to be truth.

I can well remember how fiercely I was assailed by pathologists when I attempted to speak in his name, and in America to present his views. I now feel that his is, in a very small sense, a personal triumph for me, for the predictions which I repeatedly made in the *Independent Practitioner*, when it was publishing his articles, that soon the views of Miller would be universally accepted, have all been accomplished. The deep mystery in dentistry is made plain, and there is not one of the former warring elements in sight. It is a great thing to make such a discovery, and to force all the world to acknowledge that you alone are right, and everyone else mistaken. That satisfaction is Miller's.

He is yet a young man, and there are, it is hoped, many years of usefulness before him. His picture shows him to be a man of rather slight build, with light hair and eyes, each separate one of the former having a tendency to stand upon its own responsibility. That is characteristic of the man. Each sense, as each hair, is off on a quest of its own. Each one is pursuing investigations in its own direction. Dr. Miller is always deferential to others, but he

thinks for himself. He is greedy of but one thing, and that is work. There are not enough hours in the day for his labor, and he borrows much of the night.

He is singularly fortunate in having a wife who is in thorough sympathy with him, and who aids him, not only by removing from his path many of the responsibilities which might otherwise weigh him down, but who is an active sharer in his work, who records many of his observations, and whose personal part in the writing of his books is no trifling one. Born of American parents, American in feeling and education, she yet saw the United States for the first time last autumn. We are reaping the benefit, not only of his but of her labors, and therefore, as dentists, we should have a particularly warm corner in our hearts for the wife of Dr. Miller, the daughter of the beloved and lamented Abbot, of Berlin.

Professional Advice.

By A. C. COGSWELL, D.D.S., Halifax, N.S.

Your correspondents in the last number of your JOURNAL, "Ontario" and "Pacific," in referring to fees for professional advice by those in the dental profession, have struck a *key-note* that should sound far and wide over the whole Dominion. Why should not the dentist be paid for advice relating to his specialty as well as *specialists*? It becomes necessary for every man in any branch of the healing art to devote time, money and skill, with years of application and study, to prepare himself, and acquire such knowledge of that portion of the human body that will enable him to become master of that branch as specialist, and having acquired that knowledge, and proved it by years of successful practice, why would any specialist be expected or asked to give his advice *gratis*? I am not aware that any dentist in the Dominion, or even in the United States, has ever made it *incumbent* on those who call for advice, etc., to demand a fee, or retainer; but why, as specialists we should not, I have failed to see *no reason* why. The leading dentists in England receive *five* dollars for advice, as well as the smallest operation; time is money to them, and so it is to *every man*. Only a year since, a lady, wife of a colonel, while on a visit to England, desired to have a bicuspid treated and filled; she

called on one of the leading dentists, who, after examining it, advised the *removal* of the tooth; not wishing to lose it, she decided to wait until she returned to her dentist—asking what the fee for advice was, paid the sum named—five dollars. Thinking it possible the doctor did not care to devote the time necessary to treating and filling, she called on *two others* of the profession, and with the *same result* in each, having paid in all *three guineas* for *advice* to have the tooth removed. It is evident from this that those of the profession have *agreed* upon one thing, that *time* and *advice* must be *paid for*—and why not! Call on an oculist for advice in reference to the eye, his fee is five dollars; also the oralist, or general practitioner, who examines the lungs, why should they work for charity? Ask your attorney's advice on any matter, and see what his fee will be. Simply the *know how* should be paid for; five minutes' or half-an-hour's examination may be worth more than gold can pay for to a patient, when a correct knowledge of the case is diagnosed and relief afforded. Some have said, Oh! the *time* given by the dentist was only a *few moments*; but that few moments may mean years to the sufferer of pain and anguish. To *know* what advice to give and to *give it* promptly is the mission of the *specialist*, and for *such should be paid*. Some years ago a certain physician performed an operation for a colored gentleman successfully, the physician's assistant was also a colored man, who meeting some weeks after the patient who was expressing gratitude for the skilful performance of the case, remarked as follows: "Say, Sam, the work was well done, but your massa charged a big fee, *fifty dollars* for so *short a time's* work." "Shaw! Jumbo," says Sam, "you no understand, it was not *the time* massa charged for, it *was the know how*." And if as specialists why should we not be paid for the *know how*?

Atmospheric Pressure *vs.* Adhesion.

By E. A. TESKEY, L.D.S., St. Thomas, Ont.

In placing before the readers of the DENTAL JOURNAL adhesion as best explaining the retaining force of artificial teeth, it occurred to me that peculiarities met with in daily practice could be illustrated by the conditions of adhesion as exhibited by two wet pieces of glass in contact, so much so, that it furnished evidence

for the belief that the same law governed both. Dr. Moyer in his criticism not only denies the similarity of conditions, but for fear there might yet remain some danger to his ancient theory, tries in effect to prove that there is no such thing as adhesion thus exhibited, by claiming that it is all due to atmospheric pressure. And he attempts all this by such arguments as, "I think," "I believe," "I don't believe," etc., and prescribes the air chamber for all known ills. If he thinks that the profession is satisfied with such arguments as that, he has a poorer opinion of their intelligence than the writer, and for me to reassert what he simply contradicts would be only a waste of time and space, and would leave the main question untouched, "what force it is that retains artificial teeth." To any one inclined to give the question a little careful study, my examples will commend themselves until there has been some argument at least deduced to show them untenable, notwithstanding the fact that they are "unscientific" "strike with astonishment," "are drawn from imagination," "never heard of before," and "extremely amusing," to Dr. Moyer. And if he will try to stick the thimble to his palate where the conditions are the same instead of his tongue, he will discover that nature so abhors a vacuum that he cannot produce one, and we will have heard the last of such experiments, as proof that one can evacuate the dental air chamber. Dr. Moyer has evidently not given the subject as careful study as one might reasonably expect of one given to criticise, as he can discover for himself, if he will consult the *Encyclopædia Britannica*, or any good authority on "Adhesive Attraction," and learn that it is a force exerted entirely independent of atmospheric influence; and when he has absorbed that fact, he will be better able to judge the force of his own restrictions. To any who may have been misled by the thimble trick, I would say, that in order to secure atmospheric pressure there must exist an evacuated space. Assuming, for the sake of argument, that the dental air chamber with the tongue accomplishes this end, on a soft palate the tissues in a very short time fill the chamber, then where is the evacuated space that atmospheric pressure demands, or where is it under a plate? without a chamber there is no such space, consequently no atmospheric pressure. What force is it, then, that retains the plate in position? "Adhesion," is the only rational explanation. Dr. Moyer asks, "Why the tissues enlarge

and fill the chamber if there is no suction?" The explanation is easy; it is brought about by two causes, the restriction of circulation and the depression of the tissues that bear the contact, which must have a resistance equal to the retaining force. Now I will leave the Doctor to his own thoughts, and remind him that there is but little in a name so long as we can grasp the truth it suggests.

An Old Dentist's Advice to Students.

By "ANTIQUARY."

II.

I have had an extensive personal experience of students for an Ontario practitioner, and in the first twenty years they were remarkable for order, cleanliness and, I may say, conscientiousness. I recall with every-day gratification, lads who came to me with everything against them as to early education and association, who were jewels in my laboratory and gentlemen in my home; and I compare them with the run of rough and rude boys, who get it into their heads that to be manly they must assert their independence of good manners, and who forget that the rough and rude student is almost certain to become the rough and rude man. The former earn personal respect; the latter, however, rarely win more than professional confidence. Now, you may be obliged to confide your teeth to a man whose coarseness and vulgarity qualifies him more for a bar-room than for a surgery; but what lady can respect such a dentist? As dentists we may be obliged to associate with such confreres, but who that has the instincts of an honorable gentleman desires their personal friendship? Let me tell you, boys, you are educating your manners as a dentist in the laboratory as a student.

However, there are some curious contradictions of this statement. I remember a student whose reputation for doing everything in the midst of dirt, earned for him the sobriquet of "Filthy Frank." The bench, the floor, the tools, the lathe, and himself were covered with all the dirt that could stick. He would walk in it and over it, and carry it up to the carpets. He would rather

have perished of some dirty disease than clean the lathe, and he would stand by and see his aged employer sweep the floor he had dirtied, and polish his dirty tools. His leading characteristic was slovenliness, and contempt for everything that savored of common care for the equipment of the laboratory. I have caught him using a new three-dollar pivot or plate-punch to turn a screw on a flask, rather than move across the room to get the ten-cent wrench for the purpose. I have seen him hammer mandrils into fine lathe heads and jam them in with cotton or lead, because, in his carelessness, the slip-joint to hold them had rusted. In the one year he was with me, he ruined every article in my laboratory, and when I put him out I had to get an entire new outfit. His constant cry was, "It does not matter, I haven't to pay for it." I have since learned that in the town where he is practising for himself, everything is in exquisite order in his office. His laboratory is a model; everything is in its place and shines like new nickel. In the care of his tools and instruments he is a perfect transformation. In what light am I to judge him as a student? Simply that he was dishonest and deliberately a wrong-doer, and that it was low morality, instead of pure ignorance, that ruled his conduct.

My boy, keep your laboratory tools clean. I am not ashamed to-day to invite a visitor into mine. Every plaster-cup and knife are cleaned and put away in their place the moment they are done with. You could eat your dinner on the floor. Every tool is polished and in its place. You haven't to run around searching for a certain file or knife. The lathe never spits oil in your face, or rusts for want of it. There are two students there, and they rival each other in keeping the laboratory clean and comfortable. Many a dentist has stared in astonishment when they saw six or seven sets of teeth in process of manufacture—plaster being mixed, vulcanite being filed, and not a scrap of dirt seen. It is as easy to let dirt fall into a box on your knee, or in a drawer, as on the floor. It is ever so much easier to wash a plaster-bowl at once than to dig at it afterwards when the plaster is nearly as hard as the bowl. Think it over, my boy, and remember always that the dirty student must always bear a sullied record through life in the recollection of his tutor, no matter if in after years his personal selfishness should make him "whiter than snow."

Now, don't imagine that you are created of superior clay because

you've gone to college. It is quite funny how college life, with ninety per cent. of young men, first develops their cheek and self-esteem, and lastly their intelligence. You haven't had time to get more than a smattering of the subjects you've studied, and remember your chief possession is theory. From the bottom of my heart I approve of college. I never regret going through one, but I had to unlearn most of what I learned, and I discovered that there was the greatest part of practical dentistry to be learned out of college. Do your best to get all you can at whatever college you attend, but don't put on superior airs, and imagine that the universe is waiting in suspense for notice that you've opened an office. However it generally takes ninety per cent. of young men ten or twenty years to find out how little they know, and I suppose you'll ignore what I say, and put it down to "old men's dotage."

The Ontario Dental Society and its Educating Influence.

"In Unity is Strength."

By JAMES STIRTON, D.D.S., L.D.S., Guelph, Ont.

That this is an age of conventions, associations and unions, no one will deny. The truthfulness of my context is quite apparent, and receives a thorough and complete exemplification in their existence and prosperity.

In every department of thought and research—in law, in medicine, in mechanics, in agriculture, in pedagogy, in fact, at whatever point men are focussing their energies and intellects, there you find an association of men of similar aspirations aiming at acquiring proficiency and knowledge. Even divines have their associations, where ways and means are discussed for the propagation and dissemination of the essentials of Christianity.

Such is an advancement that merits admiration. It is a unity that is impelling humanity onward in the paths of enlightenment and progress at a speed hitherto unparalleled. That dentists are not permitting their specialty to be outstripped is evinced by their keenness and industry in latent research, and by the many dental societies in existence.

Dental societies are an admirable institution. They lead to a

professional acquaintance, to a free interchange of thought, and by clinics to a direct observation of professional skill, thus giving a stimulus to scientific investigation, analytical criticism, and practical application.

A society that has been in existence for a couple of years and—although, comparatively speaking, in an embryonic condition—has done good work, is the Ontario Dental Society.

It was an admirable conception that suggested its organization. That a profession had reached such a high standard of professional attainments as dentistry in this Province, and to be without an association, certainly was a lamentable fact. That condition, however, was a thing of the past; and it is a matter of great congratulation that the seed of what we hope will eventually prove to be a towering tree of strength to dentistry in Ontario, has been successfully planted, has germinated, and is now enjoying a vigorous growth.

Not only do we believe that it will be a powerful educational factor in our own Province, but if the proper course is followed, its influence will extend far beyond provincial geographical lines, and will be shed over the whole of our fair Dominion.

The object of the writer in essaying a few lines in this issue, is not altogether to extol the benefits and advantages of a live society. These cannot but be apparent to the most critical and fastidious. The object is rather—and the writer seeks not to be obtrusive—to encourage and stimulate united activity on the part of every member, to make the Ontario Dental Society in the future a greater success than it has yet achieved, and perhaps with greater powers and educational influence than contemplated by the most optimistic. One of the first essentials of success is that every member of the profession in good standing in the Province should be a member. Local Societies, such as the "Toronto" or "Eastern Dental Societies," are excellent, no doubt, but every member of these would find it to his advantage to belong to the provincial organization. Practitioners who belong to no society are certainly standing in their own light. No matter how skilful and expert any man may be, he cannot but learn something, be improved and brightened, and be something more than a mere machine, by attending conventions and participating in the benefits to be derived from essays, discussions, clinics, etc.

As to the wisdom of admitting as members those who have exceeded the bounds of professional ethics, is not the theme of this essay.

“While the lamp holds out to burn
The greatest sinner may return,”

appears to have been the motto of the promoters of the Society ; and perhaps it is not a bad one.

Another essential is that due preparation be made for the annual meeting of the Society. The subjects upon which papers are to be read and discussed should be assigned to their respective essayists and critics sufficient time before the meeting to admit of them being dealt with in a complete and scientific manner. The observation was made to the writer at the last convention that such a paper was too scientific and elaborate. Such is an erroneous idea. We cannot be too scientific. The basis of all science is truth, and to reach that basis should be the aim of every progressive practitioner.

No doubt, a surfeit of theorizing and research would become tiresome, but varied with practical discussions, with suggestions, with live topics, there cannot but accrue the greatest interest and benefit to every participant.

Another point, and although not an essential, still of great importance, is to give a complete though not technical report in the public press of the Society's proceedings.

Nothing tends to raise our profession more than to let the public know that dentists are a live, progressive, intellectual class of men, and are proud of their calling. In the past, we have devoted all our energies in reaching high educational attainments ; let a little of that superfluous energy be now devoted to the education of the public. The higher you raise the standard of public appreciation of dental services, the more you benefit the profession, and the lower you degrade quackery and its devotees. The writer is well aware that public reports will be inadequate for the educational purpose, but it is a step in the right direction ; and anything that tends to remove the gloom of ignorance that many of the public are surrounded by in regard to dental services, should meet with the cordial approbation of the entire profession.

Education in the way of university affiliation, and in making us

a ramification of the great public school system of Ontario, has done much for our advancement; but much is to be done, and "Progress" should be the watchword.

That these few observations, hurriedly written, will be received in the good spirit they are written, is the sincere desire of the writer. Dentists should be united. We should support and uphold in every way our societies, our profession, and, last but not least, our admirable JOURNAL. The Ontario Dental Society should meet with the cordial support of every dentist in the Province, not only by our sympathies, but with the mite of a subscription, which—and conformation with the code of ethics—constitutes a member. Especially by the young men should it receive a loyal and hearty support. Dentistry looks to the young men for its sustenance and standing in the future. The essayist seeks not to write in the slightest degree of disparagement of the older men, their education, or their influence. Far from it. All honor to those whose heads are grey, who stood by dentistry in Ontario in its early days, and who, by their character and indefatigable effort, made it rise from a metaphorical nothing, from a field of empiricism and illiteracy, to the proud position which it now holds in the dental arena. This is a heritage which is given to the young men. It is one that should be received with open hands and warm hearts, and our constant aim and ideal should ever be, how best to advance our profession, how best to educate ourselves, how best to educate the public to a just appreciation of our services.

That one of the means of accomplishing these objects is to be found in our Provincial Society is the belief of the writer. If such belief is reciprocated by the profession, or if any of the ideas enunciated in this hurriedly-written article be entertained by brother practitioners, let us unite together and make every effort to build up and sustain our Society, make it a veritable Mecca, from which inspiration may be drawn to ward off and antagonize the cares and worry of professional life.

Selections.

A New Method of Inserting any Number of Teeth upon One or More Roots.

By W. H. ELLIOTT, D.D.S., Montreal.

(Reprinted from *American Journal of Dental Science*, March, 1844.)

The injurious effects of placing plates immovably upon the gum, so that they cannot be taken off for the purpose of cleansing them, should be a sufficient apology for making it a principle never to attach plates of any description either to the roots or crowns of the natural teeth, in such a way that they may not be moved at pleasure by the patient. It is not necessary to state here, how or why the gums under and around such teeth are kept in a state of irritable inflammation, or its consequent effects upon the delicate membranes surrounding the roots of the adjacent teeth. These are already understood, and few, it is hoped, will hesitate to embrace any method that promises to do away with so many evil consequences. No advantage whatever can be granted by covering a portion of the gum with a plate, which is permanently attached to the roots of teeth for its support ; for the gum will always yield sufficiently to pressure to leave the whole force to be sustained by the roots ; and when such plates are used, they merely serve as connecting links between the different parts of the work.

The cut below represents the writer's "method of inserting any number of teeth upon one or more roots," and also his method of proceeding when the roots are so convergent or divergent that the pivots cannot be made to enter the openings at the same time.

By reference to the cut, it may be seen that one of the pivots is detached from the rest of the work, and by being made to fit snugly through a short tube, it counteracts any lateral force equally as well as the pivot, which is permanently soldered to the plate. In case the roots stand exactly parallel, a detached pivot is not required, but if the roots be not parallel, one of the pivots must be detached ; and when the work is placed in the mouth, the permanent pivot

must first be secured to its root, and then the detached pivot may be forced through the tube into the root to which it belongs.



In preparing the roots, it is necessary to file them a little below the edge of the gum, as in case of a single pivot tooth. The opening in the roots should be drilled just large enough to receive the golden pivots which are to be used for the support of the work ; if a detached pivot be used, the hole in one root must be sufficiently large to receive the tube through which the pivot is to slide.

If the roots be not exactly parallel, in withdrawing the wax from the mouth, one or both of the iron pivots will be found slightly moved, so that a small opening will appear between the pivot and the wax upon one side, the disturbed pivots should be carefully moved into their true positions, and when this is done, the opening in the wax will all appear upon the other side of the pivot. On removing the wax from the model, the iron pivots will be found to indicate the exact position and direction of the openings in the roots ; an end which cannot be obtained by other means.

Models for this purpose should be composed of one part of talc and two parts of gypsum ; talc is preferable to sand because, being finer, it makes a more perfect model, and it is necessary that it be unchangeable by heat.

After the model has become sufficiently hard, the iron pivots may be carefully withdrawn from it and their places supplied by the golden pivots or pivot and tube, as the case may require. The tube should be long enough to rise above the plate at least one line, if practicable, as all the tube below the plate is to be cut off after the work is soldered.

Two very thin platina or gold plates may now be procured, about three-fourths of an inch in length and wide enough to cover the end of the root ; after a hole has been made through the end of each plate, they may be slipped over the pivots, or pivot and tube, and brought to a perfect fit to the model by being pressed down upon it. This may be done without injuring the model, if the

plates be thin and well annealed. The free end of these plates, which should project backward towards the palate, may now be bent down near the model and fastened by laying on more of the mixture of talc and plaster of Paris ; and then, when the teeth have been selected, fitted, and fastened to the model by cement, more of the mixture may be put upon the model, so as to cover the anterior surfaces of the teeth. Those teeth nearest the pivots may now have perpendicular backs placed upon them, reaching down to the small plates upon the ends of the roots ; while the other teeth should have horizontal backs, stretching across from one perpendicular back to the other, so as to connect the different parts of the work together.

The cutting edges of the teeth may now be covered with the mixture, and the whole bound lightly together by a few turns of fine binding wire. When soldered, the plates may be cut off and trimmed to the exact size of the ends of the roots, and all that portion of the tube represented by the dotted lines in the cut may also be cut off.

Work of this kind must always depend upon the solder for strength, and, on that account, thin plates, which are much more easily wrought, are preferable.

Correspondence.

A Correction.

BY DR. WILLMOTT.

To the Editor of the DOMINION DENTAL JOURNAL :

DEAR SIR,—On opening the current number of the JOURNAL this morning, I was astonished beyond measure, and, I fear, betrayed into some very uncomplimentary remarks respecting the editor, when I found myself reported as saying, at the dental students' dinner, that "Until recently, all that had been necessary for a medical or a dental student across the line to graduate was to be able to sign your name and produce a \$5 bill." Of course, I never made such a statement. I am not quite a fool. The report seems

to have been taken from one of the daily papers which put some such statement into my mouth, but corrected it next morning in its editorial news column. I was speaking at the moment of the application of the R. C. D. S. for membership in the National Association of Dental Faculties, and referring to the good work which the Association had done in raising the standard, extending the term to three years, and securing a matriculation examination, remarking, incidentally, "that until in recent years all that was necessary to *matriculate* was to sign your name and produce a \$5 note." I matriculated in that way myself, and nothing more was at that time required. So far from belittling the American colleges, I was really congratulating dentistry on a vast improvement on the past. While writing, I may be allowed to add, that while always ready to defend the R. C. D. S. against false statements or unfair criticism, I am far too sensible of the defects in our college—defects which I see no near prospect of being remedied—to launch out in any such wholesale laudation as that with which I am credited. I am very sorry such a manifestly false statement found a place in your columns, as it must do me much harm. I trust that any of your exchanges who may have referred to the matter will give me the benefit of this correction. I have no special ambition to be known as the libeller of the American colleges, of one of which I am a graduate.

I am, yours etc.,

Toronto, January 1st, 1891.

J. B. WILLMOTT.

Editorial.

Portrait and Life of Dr. W. D. Miller.

We feel sure our readers will be gratified at the literary and artistic treasure we have been enabled to give them this month, by the mutual kindness of Dr. Miller and Dr. Barrett. In acceding to our request for his photo, Dr. Miller explains how fully his time is occupied, but gives us a hope that this JOURNAL may expect an article from his pen. Dr. Barrett has added one more to the many valuable acts of generosity he has shown to his brethren in Canada, while this contribution will be of world-wide professional interest.

The New Brunswick Act Unpatriotic if not Unconstitutional.

It would appear as if it was within the power of the Provincial Legislature to oblige New Brunswickers who wish to become dentists in their own Province, to go to the United States or elsewhere to obtain their education, simply because the appointed dental "council" do not wish to take upon themselves the work of examiners, which the incorporated bodies even of British Columbia and the North-West Territories have patriotically assumed. We believe the legislation is not only unwise in the present and future interests of New Brunswick, but unpatriotic and altogether *unnecessary*; and we trust that proper representations will induce the Legislature to remodel it, and to insist that the profession asking legislative protection for themselves, shall give the people of New Brunswick that public protection which only a Provincial Board of Examiners can secure. An effort was made to compel every one who was practising at the passage of the Act, to obtain a degree from some school of dentistry; thus forcing them to give up practice and go abroad for the purpose. It did not seem to strike the promoters, who possessed foreign degrees, that there was any intolerance in this procedure, but the Legislature wisely protected those who had been in established practice since the 1st of January, 1889. The attempt to legislate a man out of business as well as out of New Brunswick, was not a whit more tyrannical, than the power the Council now holds to legislate a student *out of the Province* to get his education; and we take decided exceptions to the following clause of the Act: "No person shall be entitled to registration under this Act unless he shall satisfy the Registrar by proper evidence that he has fulfilled all the requirements for graduation *in any one of the colleges or dental schools in the United States of America*, recognized by the National Association of Dental Faculties, or in any other college or dental school recognized by the Council."

Now, there is no probability that a New Brunswicker, wishing to study dentistry, will go to England or France, where there are dental schools; and as the school in Toronto is distinctively for the local purposes of Ontario students, the New Brunswickers would be forced to go to the United States. We should just as

strenuously object to the clause if it forced New Brunswickers to go to the Ontario school as to those in a foreign country, because there is no excuse whatever, especially among men who have college qualifications, why the Council should not promote the study of dentistry in the Province, as Quebec, especially, has done for over twenty years, and Manitoba and the North-West are doing now. There is no objection to a certain measure of recognition of United States diplomas, but it is very extraordinary that while several of the States will not recognize these diplomas without a subsequent examination before State Boards, the New Brunswick Council think them good enough for New Brunswick ! And it must be remembered that our good brethren over the border do not recognize the L.D.S. of any Province of Canada.

Everybody knows that the possession of a dental degree is no criterion either of a classical or a professional education. We say this advisedly ; and, while recognizing late efforts to extend the time of study, and the excellence of many of the teachers, it is well known that the D.D.S. is held to-day by hundreds of arrant impostors, who may be said to have bought it in a three or four months' course. Yet the New Brunswick Act recognizes these quacks as eligible to practise in that Province, while it excludes the licenses of Quebec, Manitoba, and the North-West. For instance, a Quebec student passes a classical and mathematical preliminary, before authorities outside of the dental jurisdiction, is indentured for four years consecutively to a licentiate, where he certainly obtains a more thorough knowledge of mechanical dentistry than any college can supply in the time it demands. He has to attend anatomy, physiology and chemistry, in a medical university, has to pass a primary examination at the end of the second year, and a final at the end of the fourth, besides practically demonstrating his skill in operative and mechanical dentistry for several weeks successively before the final. Any student wishing to avail himself of the facilities for operative work, is allowed to attend the recognized United States colleges one term of his four years. Yet the New Brunswick Act recognizes degrees obtained without matriculation in four months as superior. No line is drawn at the D.D.S. as it was and as it is. The United States colleges now demand that students listening to lectures in English, shall have a knowledge of English ; but hundreds of men were graduated who could neither

speak nor read the language of the country ; and by the New Brunswick Act they are eligible for New Brunswick. The quacks who disgrace the D.D.S. are as eligible for New Brunswick registration, "*and no questions asked*," as the eminent men who honor it !

Imagine the State of Maine passing a law to force medical students in Maine to proceed to Ontario or Quebec Province, and obtain a McGill or Laval degree before they could practise in Maine ! The New Brunswick Act places a premium upon education in a foreign country, and a penalty upon that in Canadian Provinces. It creates a Council as a body of criminal detectives, when it should make it a Board of Examiners, to detect the ability of every holder of a diploma, as much as to prepare some method of provincial study. The projectors have been careful to protect themselves in more ways than one. A special clause enacts that no "assistant" shall act as dentist or dental surgeon "*outside of the office of his employer*." It provides "assistants" to make money for the chosen few, while it not only prevents them practising for themselves, to which we cannot object, but it absolutely prevents them utilizing their time in New Brunswick to become dentists in New Brunswick. If, after "assisting" in an office, a born New Brunswicker wants to become a dentist, all the time he served in New Brunswick is lost, and he must go to the United States and pass two or three years getting a diploma, which not even the States recognize without a subsequent examination ! The profession in Quebec never got a cent of aid from the Provincial Legislature, but for over twenty years they have educated and licensed nearly a hundred Quebecers as dentists. As we said in a previous number, there is nothing in the fees to attract the desirable foreign D.D.S. to New Brunswick ; while recent visits of perambulating quacks, some of whom have the D.D.S., show the class which New Brunswick legislation is obliged to register as legitimate dentists. The promoters cannot plead ignorance of all these facts, as they favored this JOURNAL with a draft of the proposed Act months before it became law, and were kindly advised from the experience of Ontario and Quebec dental legislation, to legislate for New Brunswick and Canada first, and the United States afterwards. It is a recognized principle not to let any of our legislation militate against Canada in favor of foreign countries ; but the Legislature of New Brunswick, no doubt unconscious of the facts, has actually legislated

for the United States first, and for New Brunswick afterwards. In the interest of the Province the Act should be remodelled. It would ultimately be in the interest of the profession. There is no reason why, if a member of the New Brunswick Legislature wants to make his son a dentist, that he should be forced by his own law to go to the very great extra expense of sending him for three years to a foreign country. Something, too, might be said on the moral aspect of being obliged to place a boy of seventeen for three years, hundreds of miles from his own home, when there are qualified dentists in New Brunswick competent to do as much as the profession in Quebec and the North-West Provinces. We are sure that nowhere, more than in the United States, will the unpatriotic and humiliating character of this Act excite the contempt of honest men.

Nickel and Platinum in Canada.

Canada is perhaps the richest country in the world in mines and minerals, which have as yet only been scratched on the surface. One of our late exchanges refers to the fact that as strong as steel is, it can be made stronger by an alloy of from three to five per cent. of nickel; that this means that we can have larger bridges and lighter machinery than ever. It is not said what influence this alloy may have on our dental instruments and equipment. If it can in any way improve the many articles of steel used by the dentist, it will be a boon. In this connection, Canada has the largest and finest deposits of nickel in the world.

It is not possible yet to know to what extent platinum exists in the Dominion. It is found in Quebec Province, in the gold washings of Rivière du Loup and Rivière des Plantes, but the quantity so far as known is insignificant. In washing for gold in British Columbia, considerable quantities have been found in the form of grains and pellets; the production in 1887, according to Government statistics, being 1,400 ounces. Small quantities of an arsenide of platinum have also been obtained in the Sudbury district. No doubt, later developments will show that Canada can, perhaps, supply the world with platinum, as well as nickel.

"Nothing New Under the Sun."

A paper by Dr. J. J. R. Patrick, read before the Illinois State Dental Society, incidentally mentions a fact, which has repeatedly recurred to us, and which we have pleasure in reproducing in full on page 59. Dr. Patrick says, "If the profession were properly represented in the courts on crown and bridge work, I have no hesitancy in saying, with the evidence before me, that the International Tooth Crown Company could never obtain a favorable decision. Artificial teeth have been constructed and attached more or less permanently many years prior to the inventions claimed by these patentees. . . . W. H. Elliott, Fellow of the American Society of Dental Surgeons, in his contributions to operative and mechanical dentistry, in the *American Journal of Dental Science*, Vol. V., 1844, describes a method of making the roots to two teeth carry three porcelain crowns, and illustrates with a wood engraving his manner of constructing them."

Dr. Elliott was a Montreal practitioner, and disposed of his practice to the late Dr. Van Buskirk. He was highly distinguished as an ingenious and liberal-minded dentist, a contemporary of the late C. M. Dickinson, A. Bernard, J. H. Webster, H. M. Bowker, Hon. P. Baillargeon, J. McKee, and our esteemed late President of the Board, Dr. Chas. F. F. Trestler. We have a distinct recollection, some years ago, of seeing in the mouth of one of his old patients, just such a piece of bridge work as is described on page 59.

Delayed Matter.

We regret being obliged to defer some valuable matter until next issue.

What Dr. Willmott Said.

We draw attention to a letter in this issue from Dr. Willmott, in which he repudiates the sentiments put to his credit in his address at the college dinner. Unfortunately for ourselves, we were unable to accept the kind invitation of the students to be present, and the report was taken from a Toronto paper by a correspondent who also was not present, and who was ignorant of the correction next day, to which Dr. Willmott refers. It was sent to us, and imme-

diately sent to the printer without reading. Owing to the absence of the publisher in Germany, *we did not even get the proof*. At any rate, we had no means of knowing what was said. Nobody who was present thought it worth the trouble to send us a report. When it was known in Toronto that a mistake had been made which was corrected the next day, the importance of sending this JOURNAL the correction should have occurred to the party who had the report made right.

It ought not to overwork any one to supply us with reliable college reports. When the reporter of a Toronto paper present at the dinner (and it was a temperance one) cannot get an address correct, who can? Certainly not the editor, who was over four hundred miles away, and who has repeatedly appealed for exclusively official reports of college doings. All editors are immortal. None of them are omnipresent.

Index to Vol. II.

Was accidentally omitted at the end of the last volume. Our subscribers will find it enclosed.

Reviews.

The Micro-Organisms of the Human Mouth. The local and general diseases which are caused by them. By W. D. MILLER, D.D.S., M.D., Professor at the University of Berlin. 128 illustrations, one chromo-lithographic and two photo-micrographic plates. The S. S. White Dental Manufacturing Co., Philadelphia, 1890. Price \$5.

The importance of this work justifies us in giving it a fuller review than we had room for in our last issue; and we have no doubt it will be more appreciated, as we are able to gratify our subscribers with the portrait of the author, and a short sketch by his friend, Dr. W. C. Barrett.

Naturally, to many, such special investigations as have been made by Dr. Miller are not familiar to the average dentist, though there

is no reason now why this reproach should continue ; and to overcome the difficulties in the way of the ordinary student, the author has in the first three chapters given a short outline of the morphology and biology of bacteria ; their forms, reproduction, origin, vital manifestations, etc. The nutrient media for bacteria in the oral cavity, such as the normal saliva, the buccal mucus, dead epithelium, dental tissue softened by acids, exposed pulps, exudations of the gums, etc., are discussed ; while the methods of bacteriological investigations are clearly explained. The biological studies on the bacteria of the mouth are so well illustrated, that only the microscope under the eye of an expert could make this part of the work clearer.

Chapter V., "Mouth Bacteria as Exciters of Fermentation," demonstrates the claims of the author, that "all processes of fermentation and putrefaction depend upon the presence of microscopical small living organisms," and that the chief source of nourishment for micro-organisms in the mouth is furnished by the carbohydrates and the albuminous substances in the depressions, in fissures, or in spaces between the teeth, and upon their free surfaces. The author proves that the origin of caries depends upon the action of bacteria upon carbohydrates.

Those of our readers who possess Mr. Sewill's work on "Caries"—and which the author curiously seems to have overlooked in his list of authorities consulted—will appreciate the further emphatic repudiation of the "inflammation theory of decay," revived by three New York contributors. Dr. Miller is quite as trenchant in his remarks as was Mr. Sewill. "It is not quite clear to me how the cases stated by Heitzmann and Bædecker justify the conclusions which they draw from them, . . . to jump at once to inflammation of the dentine is making rather free with logic, to say the least. I cannot help thinking that it is here also perfectly gratuitous to speak of inflammation of dentine. It is not proved by the cases referred to. The second argument of Heitzmann and Bædecker is based upon the utterly mistaken idea that the ivory of elephant's tusks has the property of healing wounds and of encapsuling musket balls without the intervention of the pulp of pericementum." The author shows that Cuvier, Owen, Goodsir, Pluvia, Torres, and all the most recent writers on this subject, dis-

sent from the views of Heitzmann and Bædecker. In fifty-two cases of gun-shot and lance wounds of elephant's tusks, and one hundred abscess cavities, Dr. Miller did not find a single case to afford the slightest indication of any inflammatory reaction on the part of the ivory. Discussing Abbott's views on the inflammatory theory, Dr. Miller conclusively shows that the "cellular elements," "clusters of protoplasm," "medullary elements," etc., illustrated in Abbott's figures to prove his case, are "masses of micro-organisms mixed with the débris of the decomposing dentine. Among the thousands of preparations of decayed or decaying dentine that I have examined, I have not found anything which I could identify with the process of inflammation, suppuration, etc., illustrated by Heitzmann and Bædecker. Heitzmann's attempt to explain the inability of others to see things under the microscope just as he sees them, on the ground that they work with inferior lenses or that their eyes have not been properly educated, can scarcely be said to meet all the requirements of a final argument. Any one disposed to make use of the same sort of argument might be led to inquire whether Heitzmann and some of his followers have not sometimes seen just a bit too well."

The original investigations on decay of the teeth by the author, as lucidly described and beautifully illustrated in Chapter VII., is a feast of practical thought. In the etiology of dental decay, the author asks and answers the question, "What is the cause of dental decay? Dental decay is a chemico-parasitical process, consisting of two distinctly marked stages: decalcification, or softening of the tissue, and dissolution of the softened residue. In the case of enamel, however, the second stage is practically wanting, the decalcification of the enamel practically signifying its total destruction." The author shows, then, that the acids which effect decalcification are derived chiefly from particles of amylaceous and saccharine substances, which lodge in the retaining centres and there undergo fermentation. The dissolution of the softened dentine is caused by bacteria. The parasites of the mouth "do not make holes in the dentine by boring into it, as a worm bores into wood, or by gnawing it, as a dog gnaws a bone. Bacteria have no apparatus for boring. They nourish themselves alone by substances in a state of solution; and if we present them solid substances, they themselves must

liquefy them before they can make any use of them for their own nourishment." In the prophylaxis of dental decay, Dr. Miller shows the value of the use of antiseptics to arrest decay, placing bichloride of mercury at the head of the list, though admitting the fact that it is in a measure contra-indicated except in dilute solutions. Dr. Miller opposes the idea that salicylic acid (1-200 strength, or 1-300) decalcifies the teeth. He speaks highly of listerine, which is forty times weaker than a ten per cent. solution of the peroxide of hydrogen, but which devitalizes bacteria much more quickly than the latter. The author evidently has great faith in the bichloride as a mouth wash, in a strength of 1-2000, disguising the taste by rose-water in place of distilled water as a solvent. In considering the effect of tobacco, the author favors its antiseptic property.

Part II. is devoted to the pathogenic mouth-bacteria and the diseases which they produce, showing the toxic properties of human saliva under diseased conditions. At another time we shall give our readers the benefit of a review of this section, but the kindest advice we can possibly give them, is to buy the book, even if they have to go without some of the necessities of professional or even domestic life. Dr. Miller has plodded among the investigations of predecessors with a perseverance which illuminates his own originality, and the dental profession has reason to be proud of him and his unselfish labors. We were in error in our last issue in stating that this is a reprint of the German edition. The German work was the basis of the American, but the translation was generously amplified by the author all through, many important additions having been made by him.

Thus, "Methods of Bacteriological Investigation," pp. 48-67, is new. "Antiseptic Action of Filling-Materials" does not appear in the German work. A large portion of the Section on "Antiseptic Treatment of Decay" is new, and a good many of the experiments in Chapters VII. and VIII.

The foregoing are only some of the more notable additions.

To every dentist the mastery of this work means a large accession to his "capital" in brains and skill. No college education, no office education can possibly attempt even to skim over the surface of so much patient labor. The author has by no means

phrenologically or anatomically a small cranium ; but when we had digested even the list of contents, we recalled Goldsmith's oft-quoted lines :—

“And still they gazed, and still the wonder grew,
That one small head could carry all he knew.”

A Treatise on the Irregularities of the Teeth and their Correction; including, with the author's practice, other current methods. Designed for practitioners and students. Illustrated with nearly 2,000 engravings (not embracing those in the third volume). By JOHN NUTTING FARRAR, M.D., D.D.S. Vol. I. H. Helfield, General Agent, 1271 Broadway, New York. Price of Vol. I., \$6, full cloth. Sheep, \$8.

We expected that any production from the pen and experience of Dr. Farrar, who stands head and shoulders above any of his predecessors or contemporaries in this important specialty, would be worthy of his reputation, but we confess that the receipt of the first volume of the above work was a surprise, and we feel glad to associate it in this issue with the work of Dr. Miller as a fitting companion, and one of the finest evidences of the development of American dental literature. A Canadian occupies, in one sense, a neutral position between the professional literature of Europe and the United States ; and we have been accused in the past of the crime of believing, that while in practical dentistry our cousins were away ahead of the rest of the world, in theory and science they were away behind. For many years the colleges in the States were indebted almost exclusively to English and German text-books. A change has come over the spirit of this dream, as the works of Miller and Farrar testify.

We imagine that there are few practitioners who would admit that they are ignorant of Orthodontia ; but one of the charms of this great work is that the author forces most of his readers to the acknowledgment, that there is much more in the subject than was ever dreamt of in their philosophy, and that while studying the volume, they are guided by a master-mind, fully in love with his

specialty, and ambitious to produce a work which even progressive posterity will not willingly let die. It may be thought, at first glance, that the author has been too copious, and that on some portions, especially the introductory, he has indulged too much in unnecessary amplification. To say the most, that is a trifling fault. All previous works on irregularities of the teeth have had the opposite fault of condensed curtness, which frequently left one in a dilemma as to what they were trying to say. It frequently demanded an extraordinary mind to discover the meaning intended, and explanations were so often made that required explaining, that the dentists who became expert in this branch were few and far between. No doubt Dr. Farrar's work will hasten the consummation of condensation, because it will lead to such thorough understanding of the subject that amplification will become less necessary.

The table of contents and the index are as perfect as they can be, and greatly assist the student. The author reviews the history of dentistry, and shows that the first mention of correcting irregularities occurred in 1579. A brief mention of some of the divisions may show the author's treatment of the subject: The Etiology of Irregularities; Philosophy of the Author's System; Nomenclature; Explanation of the Principles in Construction of Regulating Apparatus (containing alone sixteen chapters); Retaining Devices; Laboratory Rules for making Apparatus; Philosophy of the Application of Force; Eruption of Teeth; Antagonism; Extraction, etc., etc. This includes Vol. I. Vol. II. will appear in succession, and will embrace Correction of Individual Teeth; Turning Teeth in their Sockets; Elevating Arrested Teeth; Widening, Elongating and Enlarging the Dental Arch; Protruding Teeth; Esthetics in Dentistry. Vol. III. will give duplicate illustrations of all mechanisms represented in Vols. I. and II.; also embracing others not in those volumes: Inclined Planes; Wedges; Strings and Elastic Rubber; Severed Ferrules; Metallic Springs, Screws, etc., etc.

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No. 3.

Original Communications.

Dental Dots Distilled.

By D. V. BEACOCK, L.D.S., Brockville, Ont.

Ninety-nine per cent. of ambition to try, and one per cent. of talent, is necessary to success ; in nearly everything we undertake most of us lack pluck and push.

The doors leading to success and prosperity usually fly open at the approach of those whose energies command it.

New sharp burs with rapid motion, not allowed to remain too long in one place, so as to avoid heating, is the most successful painless operating to be found. Rubber dam should always be used from the beginning of the operation.

Pain evidently follows the use of dull burs ; also sharp ones, if held in one position long enough to produce heat by friction.

Chloride of zinc and warm carbolic acid, also caustic potash, are as good obtunders as we possess, with rapidly cutting burs always cutting towards the periphery.

There are dentists who write D.D.S. and L.D.S. after their names who should hear the German farmer's comparison, "Oh, dat was noding ; I had vonce a calf vot sucked two cows, and he made noding but a common schteer after all."

Dr. A. S. Billings was told by the agent of a Dental Depot, that ninety-five per cent. of the dental profession cannot pay for the

material they buy at the time of purchase. The barber is the worst pay, the dentist next. What a sad commentary on our profession.

Pheno-camphor is easily prepared by dissolving three parts camphor in one part of carbolic acid. It is a good deodorizer, antiseptic and disinfectant, and prevents suppuration.

Cases have occurred in the experience of almost every dentist where a lady was going into a decline, with every appearance of consumption, who, as a last resort, has had a mouthful of old snags and diseased roots and teeth removed, and a comfortable set of artificial teeth inserted, who has completely recovered her health and strength, and has lived happily many years.

Take an ordinary watch crystal, such as can be obtained of any jeweller, set it in a lump of plaster of Paris, trim neatly and paint, color or bronze, to suit your taste. This makes a very handy and cheap little tray for holding amalgam or other fillings at the operating table.

Cast a little dome of lead or other soft metal somewhat in the shape of half a walnut, this will answer for a stand, insert a piece of knitting needle three inches long, sharpen the top, cut bibulous paper into little squares, say two inches or less, fill the wire full, one square at a time. This will be found handy on the operating stand of every dentist, as a square can be easily picked up with the plyers, and is much better than cotton.

Any dentist can sharpen his burs and drills when dull. There is no excuse for any one using dull instruments and inflicting unnecessary pain on his confiding patients. Take a thin corundum and rubber disk, such as is used for separating teeth: this will answer for all the medium and larger sized burs.

For sharpening drills, excavators, chisels and other small cutting instruments, use Dr. McLean's method, by making a disk of tin two inches in diameter, laying thereon a disk of cardboard and on the top of this a round piece of fine cutting emery paper, fasten them on an engine mandrel. There is nothing better for sharpening fine-edged small tools. I keep a dozen different sizes and grades of emery disks on hand all the time. No dull instruments used in this office. By using a leather disk similar to the above, you can make your excavators and chisels so sharp that they will split a hair.

Modelling Compound *vs.* Plaster of Paris.

By "PHINEAS," Ont.

So much is said and written at the present time about crown and bridge work, porcelain fillings, the construction of difficult regulating appliances, the treatment of pyorrhea alveolaris, the action of ferments, and the principles which underlie ordinary and extraordinary dental operations, that the writer almost feels as though he ought to apologize to the readers of this JOURNAL for introducing so common-place a subject as the taking of impressions. If the hundreds of young men who have just graduated from the dental colleges of the United States and Canada, were to be asked what material is the best for taking impressions, probably nineteen out of twenty would answer, plaster of Paris. That is what our college professors say, and that is what we learn from our text-books. By the average American graduate, a hint that such is not the case would be taken as an evidence of ignorance or incompetence; and yet it is safe to say, that after those young men have been in practice for a few years, many of them will use modelling compound for a large proportion of the cases where they now use plaster. Why it should be considered heresy to point out the advantages of the former, and urge its use, is a mystery, and yet such appears to be the case. A professor of prosthetic dentistry, whose name is known to dentists all over America, made the statement not long ago, that he dared not tell his students to what extent he uses the compound for taking impressions, and how seldom he uses plaster of Paris. The writer, however, although taught differently, has no hesitancy in stating his convictions that, taking all things into consideration, modelling compound is the better material, and that he rarely uses anything else in his practice, even for crown and bridge work.

In the first place, it is admitted by all that with the compound thoroughly softened, and at the proper temperature, an accurate impression with fine tracings can be obtained. The pressure necessary is not great, but is objected to by many because the soft parts yield readily, and are, therefore, compressed more than the roof of the mouth. This, instead of being an objection, is in reality an advantage. Under pressure the soft parts are forced into the

position they are likely to occupy under a plate, and the necessity for relieving the pressure of a plate on the roof of the mouth, so frequently referred to by dental writers, is removed. Then, too, its consistency is such that the loose tissues attached to the gum are pushed away, instead of imbedding themselves in the material and distorting the impression, as is often the case when a lower impression is taken in plaster. It is true an absolutely correct impression of a dovetailed space cannot be obtained by its use; and, judging from the emphasis which dental writers attach to this fact, one would suppose that the fitting of a plate to the bottom of a dovetailed space was a very important matter. To take an impression of a dovetailed space in plaster is no easy matter either, but supposing it is accomplished, what has been gained? The plate may be fitted to the floor of the space on the model, but it can never be inserted until it has been trimmed to the size of the opening, and then no longer fills the space at the bottom. If compound is used however, if removed at the proper time it will yield slightly by virtue of its elasticity, and the model, when made, will present a space to which a plate can be fitted, which in most cases will go into place in the mouth without trimming.

The absence of the air bubbles in the impression, the exactness with which the amount of material can be gauged, the ease with which the model can be separated from the impression, and the freedom from injury of the former in the process, might all be referred to, but are of little consequence compared with the comfort of the patient during the operation. While there is nothing disagreeable in the sight, taste, or smell of the compound, the use of plaster frequently produces nausea and loathing. The very sight of the white semi-fluid mass before it is put into the mouth is enough to turn a delicate patient sick, and when to this is added the insipid taste and the sensation of a creamy mixture gradually hardening in the mouth, with now and then an odd piece breaking off and dropping into the fauces, is it any wonder that many look upon taking the impression as worse than the extraction, and wear a temporary denture months longer than they ought sooner than submit to its repetition? The dentist who attends most closely to the wants and comforts of his patients will always be most successful, and the change from the use of disagreeable choking plaster of Paris, to the comparatively pleasant and cleanly modelling com-

pound, is certain to add not a little to a dentist's professional popularity.

Adhesion *vs.* Atmospheric Pressure.

By S. MOYER, L.D.S., Galt, Ont.

Dr. E. A. Teskey has evidently not yet experimented upon his own mouth, and is, therefore, incapable of intelligently deciding upon the true merits of a question, upon which he is supported by neither theory nor experience. He still asserts that "it is impossible to create a vacuum by withdrawing the air, or any portion of it, from the ordinary air-chamber."

While a number of our best dentists do not employ air-chambers, especially in permanent dentures, it is not for reasons mentioned by Dr. Teskey. In his objection, that of inability to form a vacuum, he stands alone. When he claims that I prescribe the air-chamber "for all known ills," he shows the error of his imagination. I know there are objections to its use, but Dr. Teskey has mentioned none of them. There are cases in which I would not recommend it, but not because of inability to evacuate it. All I claimed in my first article was, that they increase the retentive force that already exists.

In his efforts to support his theory, he ridicules one of the first axioms of science, the teachings of all dental colleges, the writings of all authorities on dentistry, and the experience of all experimenting dentists. He cannot get two per cent. of the dentists in Ontario to agree with him, that suction is never produced. This being the case, argument is of no avail. He persists in holding up "an idea that occurred" to him, against the researches, the experiments, and the teachings of the dental world, and has the audacity to say that others are "ancient theories."

When he tries to prove that a plate cannot be sucked to the roof of the mouth, by taking a thimble as an example, his argument is more worthy of the nursery than the columns in which it is found.

The only other point that he endeavors to introduce in substantiation of his theory, only the more fully proves him to be unaware of the first principles of physical science. I refer to his statement

in which he says : " In order to secure atmospheric pressure, there must exist an evacuated space." If Dr. Teskey will read the introductory chapters of some work on physics, he may be surprised to learn that atmospheric pressure is constant, that it is equal to about $15\frac{1}{2}$ lbs. to the square inch, and that it is transmitted equally in all directions. He will also learn from those chapters, that the article he referred to in the Encyclopædia Britannica, upon Adhesive Attraction, supports my contentions, and what he concludes is the force of adhesion, is nothing more than the adhesion of contact due to atmospheric pressure.

His quotations from my first article are incorrect, unfair and misleading. Instead of attempting to reply to my arguments, he shows his inability to do so, by claiming they were such as " I think," " I believe," " I don't believe," etc. Some men have " just enough learning to misquote," others misquote intentionally. " I think " was used but once in my article, and then as a quotation from Dr. Teskey. " I believe," was used but once by me, in which case I upheld one of his contentions. " I don't believe " does not occur at all in my article. The time spent by my professional brethren reading such erroneous statements and arguments could certainly have been more profitably employed.

Affected Antrum.

By D. McPHEE, L.D.S., Arnprior, Ont.

Mrs. C——, aged thirty, called on me to have her upper teeth examined, and, if necessary, extracted. The case presented neuralgic pains, attended with considerable inflammation and swollen gums, the pupils also being much dilated. Having removed all the teeth, I found, on examination, a discharge of bloody pus oozing from an opening leading into the antrum, at the palatine proof of the superior left pre-molar. There was considerable necrosis going on, the palatine root being completely decayed, as I found in the operation of extracting. Through the opening I could insert an ivory probe, equalling in size the handle of an ordinary excavator. I at once shaped an instrument, with which I

removed all the sloughing process. I next cauterized the parts, syringing freely with warm salt and water mixture, alternated with a solution of aromatic sulphuric acid, continuing this treatment morning and evening for a week. On the fourth day from the beginning of the treatment, relief came in every particular. Hæmorrhage, which had all along been free, subsided. No tube was required, owing to the large opening which still remains, and which, being covered by the plate, does not form a harbor for any secretions. The patient had also been suffering from catarrh, which has almost entirely disappeared, owing to the free passage caused through the opening mentioned for the discharge of the fetid mucus, as well as for the convenient opportunity afforded for cleansing the antrum, which opening will, of course, always remain.

Dentistry in New Brunswick.

By C. A. MURRAY, D.D.S., Moncton, N.B.

Previous to April, 1890, New Brunswick was without a Dental Law, and consequently was an open field for quacks, college and office students with a keen desire for the almighty dollar, rather than any desire to give the public the equivalent for their money either in work or theory. But the dentists of the Province at last rose up in their strength, and by their united and untiring efforts succeeded in getting a bill passed at the last sitting of the Local Legislature, and feeling with pleasure and relief that it had become law, and the first step taken to elevate the standard of the profession in New Brunswick.

It remained in a state of quiescence until the Government appointed the three scrutineers, whose duty it was to examine the credentials of those claiming the qualifications for registration, and the three members of the Council required by the Act. The scrutineers were Drs. John M. Smith, St. John, N.B.; H. B. Torrens, Fredericton; and C. A. Murray, Moncton; who, on the morning of the second Tuesday in August, waded through the numerous applications for membership, rejecting or accepting, as the validity of their claims appeared to them. In the afternoon of the same day the first meeting of the New Brunswick Dental Society met in

Fredericton, and was attended by the representative dentists of the Province, who enthusiastically commenced the business of the meeting. Dr. A. F. McAvenny, of St. John, was elected President; Dr. H. B. Torrens, of Fredericton, Vice-President; and Dr. C. A. Murray, of Moncton, Secretary-Treasurer. A committee composed of Drs. Magee, McAvenny and F. A. Godsoe, were elected to frame by-laws, etc., for the Society. After devoting some time to important questions concerning the Society, the meeting proceeded to elect the four members of the Council to assist those appointed by the Government. The meeting adjourned, to meet in St. John on the second Tuesday in August, 1891.

On September 30th the Dental Council, composed of Drs. J. M. Magee, of St. John; W. H. White, of St. Stephens; W. D. Camber, of Woodstock; and H. B. Torrens, of Fredericton, elected by the Society; and Drs. A. F. McAvenny, of St. John; J. G. Sproule, of Chatham; and C. A. Murray, of Moncton, appointed by the Governor in Council; met in the office of Dr. McAvenny to elect their officers and prepare to do the business which devolves upon them. Dr. Murray was elected President, and Dr. Magee Secretary and Registrar. After the business of the meeting came an unexpected pleasure, Dr. McAvenny entertaining the members of the Council to a *recherche* dinner at the 'Union Club, where an exceedingly pleasant evening was spent.

Humbug in Dentistry.

By L.D.S., Ont.

What a volume might be written on the part that humbug plays in the practice of some dentists. There is no profession, even the most sacred, which is free from the contamination, and when the very pulpit of every creed has its humbugs, it is no wonder that they *crawl* into medicine and dentistry. There is no country in the world where they are as prolific as in the United States, and often they settle in Canada, and frequently succeed in bamboozling the public, but very seldom the members of the profession they have in some way slipped into. Go to the root, and you rarely find these mortals possessing qualifications honestly obtained.

Unfortunately, anybody in the States once could, without any matriculation examination, get medical and dental degrees, long before Canadian students were admitted to their primary, and it was once safe when you were in a crowd, to shout "doctor," or "colonel," and almost every head would turn in response. Now, any one with half an eye could see that no first-class man would come to Canada to practise unless he had to leave his country for his country's good, or unless he thought we were a people more susceptible than our neighbors to humbug. It has been common for some of our best men to go to the States, because there is greater scope among a large population, and Canadian degrees justly obtain respect there. A graduate of any of the Toronto medical colleges, and also of McGill, at Montreal, carry with their parchments a claim to professional respect. The world knows and respects the many eminent men who have done honor to the professions in the United States ; but these men do not choose Canada as a preferred place to practice. Look at the medical quacks who organize "Institutes," and travel through the land on the strength of a Canadian license. In dentistry, too, have we not men whose every instinct is that of humbug? the men who make use of the Church and the Sunday-school, lodges, and every possible means of making the public believe that they are "superior," or that they possess some infallible prescription brought down from the skies specially for themselves. Is it not disgusting and degrading to see the base use some of these men make, for business purposes, of the holiest things ; bringing "shop" into the very communion, and the Bible they ostentatiously carry, containing a lot of their cards for distribution to children in their Sunday-school class? I have seen him with his Bible in his Sunday class with five or six cards projecting at texts he wanted. He would, perhaps half a dozen times a year, use these cards to write texts upon, which he would then give to his class, and tell them to get their parents to look up and explain those texts! I knew one who was very fond of addressing the school, and he never failed to begin a story as follows: "My dear children, in my office, yesterday," or "last week, a little boy came into my office with a toothache," etc. He made his children carry his cards in their pockets, and "toot" in the day schools, by getting them to bring the boys into the office to show them "all the wonderful things that pa has, *and no other dentist has.*"

Of course, such a sneak may have "success," but he loses what every honest man ought to desire—the respect and esteem of his brethren in the profession. "Humbug" is stamped in his face, though he can put on the look of a humble saint. We each and all have a right to desire success, but no professional man has an ethical "right" to send out "tooters" in the schools, day and Sabbath, and to use the vulgar and mendacious tricks of the quack gilded over. Old practitioners will recall by these lines two past and gone Ontario practitioners who resorted to these devices, and whose memory will ever be despised by every one but a few, who while professing to be open and honorable, are as sleek sinners in humbuggery as any New York or London quack.

[We have been asked specially to insert this. We do so, though we are unwilling to believe that there is any one now in the profession in Ontario whose head the cap will fit.—ED. D. D. J.]

Valedictory Address.

By WILLIAM RICHARDSON, L.D.S.

Mr. President and Gentlemen of the Faculty, Fellow-Graduates and Students, Ladies and Gentlemen,—Permit me, sir, on behalf of my fellow-graduates, to express to you the extreme pleasure and satisfaction which it affords us to meet you for the purpose which has brought us together. During the months that are past, we have looked forward to this occasion with hope, mingled with fear. Now that we have received from our Alma Mater, the coveted token of her approval of our attainments in our chosen profession, we cannot refrain from expressing the joy and satisfaction which fills our hearts.

Allow me also to express our pleasure in seeing so many fair faces smiling upon us in this the hour of our rejoicing. However glorious may be our achievements, however satisfactory may be our progress, however sweet may be our rewards, woman's approving smile seems necessary to complete our gladness and satisfaction.

The occasion which brings us together is one of special interest to the Board and Faculty of our Dental College, as marking the

completion of another year of successful labor in their chosen work of dental education. It is of special interest to the graduating class of this institution, as it brings to them the first fruits of the rewards of anxious days and nights of toil. But while of some special interest to these, it is by no means devoid of interest to the citizens of Ontario generally. By the wisdom of her legislators, and the intelligence and liberality of her citizens, Ontario is far in advance of her sister provinces in the advantages which she offers the student in every branch of literature, science and art.

In the past, some of our students in dentistry have been indebted for their instruction to colleges of American cities of earlier birth and more mature development. Now we receive didactic instruction in the Royal College of Dental Surgeons, equal to any that can be obtained on this continent, and if some features are not, as yet, so efficiently illustrated as in colleges in the States, we must remember that one of those colleges has just passed its fiftieth year, and others have had thirty and forty years of existence as richly endowed institutions in large and populous States, while our college is just commencing to spread its wings. And yet not one of these colleges has, so far, exacted the high standard of matriculation, or conditions of studentship, demanded of students in Ontario.

To my fellow-graduates permit me, sir, to say something in addition to the words of wisdom and encouragement, and the very excellent and appropriate suggestions addressed to us by Dr. Wood on behalf of the Board.

During our college course, I know of not one feud or estrangement to cause regret or mar the pleasant memories of the months we have spent together.

If our intercourse in the future with one another and with our brother practitioners be marked by the same good feeling and courtesy, the same willingness to learn, the same readiness to impart, which has characterized our college life, we will be more honest to ourselves and our patients, and to the noble profession in which we have been educated.

In entering on our professional career we should aim to excel; those who excel always have room and to spare. Let us, then, as we go forth from this hall, not rest satisfied with what we have already attained, but, using that as a stepping-stone, endeavor, by

careful observation, diligent study, and earnest labor, so to advance in knowledge and skill as to make all the advantages which Providence has placed in our way, tend to the advancement of our specialty, that we may attain to that excellence which will not only return rich pecuniary benefits to ourselves, but confer lasting benefits upon the profession.

Another very important truth which we are liable to forget, but which it would be well for us to remember, is that in this world the unalterable law of nature proclaims that every human being, however exalted or humble his position in life may be, exerts an influence on the destiny of every individual with whom he comes in contact; whether we will or not, we make every one with whom we associate better or worse. As we go forth, therefore, gentlemen, to the active duties of life, to make for ourselves a name and a reputation, not only as professional men but as citizens, let us decide that in the homes where we dwell, in the social circles in which we move, in the community where we reside, in the nation which we are proud to call our own, our influence, be it great or small, shall ever be exerted on the side of right.

Accept, gentlemen of the Faculty, our grateful acknowledgment of your unwearied labor in the several departments which have been more immediately under your individual charge, to impart to us a thorough knowledge of our profession.

We trust that, however inattentive you may sometimes have thought us, you have not altogether been disappointed in the progress which we have made. We are conscious of not having profited to so great an extent by your painstaking and valuable instructions as greater application and more studious habits would have enabled us to do, but it is very gratifying to know that you have been able, we trust heartily, to sanction our entering upon the practice of dentistry. We accept it gratefully, and we hope, gentlemen, that our record in the future may in no wise disappoint your just and reasonable expectations concerning us. While the interesting and, we trust, mutually pleasant relation of teacher and student is now severed, we shall ever bear you in kindly remembrance, and shall always feel a lively interest in our Alma Mater.

Hoping that prosperity may continue to rest upon you, and upon the institution with which you are so honorably connected, we bid you a formal but affectionate farewell.

Selections.

The Necessary Peroxide of Hydrogen.

Read in the Section of Surgery and Anatomy, at the Forty-first Annual Meeting of the American Medical Association, held at Nashville, Tenn., May, 1890.

By ROBERT T. MORRIS, M.D., of New York.

Published by the *Journal of the American Medical Association*, Chicago, August 9th, 1890, page 216.

Stop suppuration! That is the duty that is imposed upon us when we fail to prevent suppuration.

As the ferret hunts the rat, so does peroxide of hydrogen follow pus to its narrowest hiding-place, and the pyogenic and the other micro-organisms are as dead as the rat that the ferret catches when the peroxide is through with them. Peroxide of hydrogen, H_2O_2 , in the strong 15-volume solution, is almost as harmless as water; and yet, according to the testimony of Gifford, it kills anthrax spores in a few minutes.

For preventing suppuration we have bichloride of mercury, hydronaphtol, carbolic acid, and many other antiseptics; but for stopping it abruptly, and for sterilizing a suppurating wound, we have only one antiseptic that is generally efficient, so far as I know, and that is the strong peroxide of hydrogen.

Therefore, I have qualified it, not as "*good*," not as "*useful*," but as "*necessary*." In abscess of the brain, where we could not thoroughly wash the pus out of tortuous canals without injuring the tissues, the H_2O_2 injected at a superficial point will follow the pus, and throw it out, too, in a foaming mixture. It is best to inject a small quantity, wait until foaming ceases, and repeat injections until the last one fails to bubble. Then we know that the pus cavity is chemically clean, as far as live microbes are concerned.

In appendicitis, we can open the abscess, inject peroxide of hydrogen, and so thoroughly sterilize the pus cavity that we need not fear infection of the general peritoneal cavity, if we wish to separate intestinal adhesions and remove the appendix vermi-

formis. Many a patient, who is now dead, could have been saved if peroxide of hydrogen had been used when he had appendicitis.

The single means at our disposal allows us to open the most extensive abscess psoas without dread of septic infection following.

In some cases of purulent conjunctivitis, we can build a little wall of wax about the eye, destroy all pus with peroxide of hydrogen, and cut the suppuration short. Give the patient ether, if the H_2O_2 causes too much smarting. It is only in the eye, in the nose and in the urethra that peroxide of hydrogen will need to be preceded by cocaine (or ether) for the purpose of quieting the smarting, for it is elsewhere almost as bland as water.

It is possible to open a large abscess of the breast, wash it out with H_2O and have recovery ensue under one antiseptic dressing, without the formation of another drop of pus.

Where cellular tissues are breaking down, and in old sinuses, we are obliged to make repeated applications of the H_2O for many days, and in such cases I usually follow it with balsam of Peru, for balsam of Peru, either in fluid form or used with sterilized oakum, is a most prompt encourager of granulation.

If we apply H_2O_2 on a probang to diphtheritic membranes at intervals of a few moments, they swell up like whipped cream and come away easily, leaving a clean surface. The fluid can be snuffed up into the nose and will render a fœtid ozæna odorless.

It is unnecessary for me to speak of further indications for its use, because wherever there is pus we should use peroxide of hydrogen. We are all familiar with the old law, "*Ubi pus, ibi evacua*," and I would change it to read "*Ubi pus, ibi evacua, ibi hydrogenum peroxidum infunde*." That is the rule. The exceptions which prove the rule are easily appreciated when we have them to deal with.

Peroxide of hydrogen is an unstable compound, and becomes weaker as oxygen is given off, but Marchand's 15-volume solution will retain active germicidal power for many months if kept tightly corked in a cold place. The price of this manufacturer's preparation is about 75c. per lb., and it can be obtained from any large drug house in this country. When using the H_2O it should not be allowed to come into contact with metals if we wish to preserve its strength, as oxygen is then given off too rapidly.

H_2O_2 must be used with caution about the hair, if the color of

the hair is a matter of importance to the patient; for this drug, under an alias, is the golden hair bleach of the *nymph's despair*, and a dark-haired man with a canary-colored moustache is a stirring object.

Abstracts from the Journals.

Arsenious Acid in Pulp Canals.

In the April *Cosmos* Dr. Fletcher, of Cincinnati, advocates the use of arsenious acid in the treatment of pulpless teeth. Being a strong germicide, he claims that it destroys the gas forming bacteria, while the quantity used is so small that even if swallowed it would do little or no harm. He uses two grains of arsenious acid with one dram of precipitated chalk, sufficient glycerine being added to make a thick paste. This he works up into the pulp-canal with a nerve-broach covered with cotton, after which he fills both roots and crown with any material desired. He has treated one hundred and forty-eight cases in this way, and in only two cases was he obliged to remove the dressing for the relief of pain.

Dental Ethics in Ireland.

According to the *Journal of the British Dental Association*, candidates are required to make the following declaration before being granted a diploma entitling them to practise dentistry in Ireland:

"I — of — hereby declare, that I am twenty-one years of age and upwards, that if I shall be granted the Diploma in Dental Surgery of the Royal College of Surgeons in Ireland, and so long as I hold the same, that I will not seek to attract business by advertising or by any other practice considered by the College to be unbecoming; and I agree that such diploma shall be cancelled on its being proven to the satisfaction of the President and Council that I have done so."

Death From Swallowing a Tooth.

The *Birmingham Daily Post* of a recent date contains an account of the death of a servant girl from having swallowed a small artificial denture. She told her mistress that she had swallowed it

while taking a drink of water, and was advised to go to a hospital when all efforts to reach the plate proved unavailing. The symptoms, however, were not alarming and she was soon after discharged and resumed her duties. Some time after she was suddenly taken ill and emitted a large quantity of blood, death resulting a little later from syncope. The *post mortem* examination showed that the plate had lodged at the bottom of the œsophagus, where it had perforated the walls of that tube, one end injuring the lung and the other penetrating the aorta, causing the hæmorrhage referred to. The plate had been purchased for 7s. 6d., and the coroner in summing up, said it was a warning to people not to buy cheap artificial teeth. The jury returned a verdict of "accidental death."

A Neat Rubber Dam Holder.

Dr. Platt, of Sterling, Scotland, is the inventor of a clever little device for retaining the rubber dam in place when the use of a clamp is inexpedient. It consists of a pin with a bead head, which fits into a small tube also provided with a bead head. The tube is passed between the necks of two teeth from the buccal side, after the rubber has been adjusted, and the pin is then slid into the tube from the lingual side. This keeps the rubber securely in place and leaves the four walls and crown of the tooth to be operated upon, entirely free from obstruction. The pins are made in different lengths from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch, to suit different cases, and of about the same diameter as an ordinary small toilet pin. The tubing to match can be had in lengths from the jewellers' supply establishments, and cut to suit, while the beads used for the head of the pin and tubes, are the ordinary white embroidery beads, small size.

The Ten Health Commandments.

I. Thou shalt have no other food than at meal time.

II. Thou shalt not make unto thee any pies, or put into pastry the likeness of anything that is in the heavens above, or in the earth beneath, or in the waters under the earth. Thou shalt not fall to eating it or trying to digest it. For the dyspepsia will be visited

upon the children to the third and fourth generation of them that eat pie ; and long life and vigor upon those who live prudently and keep the laws of health.

III. Remember thy bread to bake it well ; for he will not be kept sound that eateth his bread as dough.

IV. Thou shalt not indulge sorrow or borrow anxiety in vain.

V. Six days shalt thou wash and keep thyself clean ; and the seventh thou shalt take a great bath, thou, and thy son, and thy daughter, and thy manservant, and thy maidservant, and the stranger that is within thy gates. For in six days man sweats and gathers filth and bacteria enough for disease ; wherefore the Lord hath blessed the bath-tub and hallowed it.

VI. Remember thy sitting-room and bed-chamber, to keep them ventilated, that thy days may be long in the land which the Lord thy God giveth thee.

VII. Thou shalt not eat hot biscuit.

VIII. Thou shalt not eat thy meat fried.

IX. Thou shalt not swallow thy food unchewed, or highly spiced, or just before hard work, or just after it.

X. Thou shalt not keep late hours in thy neighbor's house, nor with thy neighbor's wife, nor his manservant, nor his maidservant, nor his cards, nor his glass, nor with anything that is thy neighbor's.
—*Phrenological Journal*.

The Eyes and the Teeth.

In the *International Dental Journal* for March, Dr. George T. Stevens, of New York, has a very interesting paper on "Some Conditions of Mutual Interest to the Dentist and Oculist." He shows that diseases of the teeth may induce reflex disturbances to the sight, and that diseased conditions of the eyes may cause neuralgic pains, which are frequently attributed to the teeth. He quotes authorities to show that rebellious cases of corneal disease frequently arise from the reflex irritation induced by difficult eruption of teeth, and states that attention to the process of first dentition will often relieve the corneal ulcers and other ocular diseases which occur at that period. To illustrate his second proposition, that neuralgic affections arising from the eyes are frequently supposed to be of dental origin, he states that some years ago while

engaged in work which required long-continued and severe use of the eyes, he was suddenly attacked with a violent pain, localized at a certain point near the root of an upper second molar. He consulted a dentist, who assured him that there was an abscess at the root of the tooth and advised extraction. He refused at first, but after days of suffering, finally submitted to the extraction of a perfectly sound tooth. He then took to his room, and after remaining a week under the influence of morphine, learned that his eyes were weak, and that their severe employment induced a return of the pain. After a rest of several months he recovered, but even now, any severity in the application of the eyes if continued for a few days brings back the pain to the old spot.

Anchored Dentures.

The December number of the *Transactions of the Odontochirurgical Society of Scotland*, contains a remarkable paper, read by Dr. Wm. Dall, of Glasgow, on "A Method of Preventing Upper and Lower Dentures from Slipping Forward." His method is to fasten two gold pins to the denture, and have them enter either holes made by drilling into the jaw, or the sockets from which teeth have been extracted. Before drilling he painted the part to be operated on with a 50 per cent. solution of cocaine, and takes care to have the drill thoroughly aseptic. In the case of the lower jaw he drills somewhere between the mental foramen and the symphysis, the upper jaw he says may be drilled at any point, care being taken not to pierce the floor of the antrum. After the holes have been drilled, one on each side, the patient is supplied with an antiseptic mouth-wash and told to return the next day when the holes are thoroughly syringed out. On the third day the impression is taken, with pins inserted in the jaw as in the case of pivots, and the denture is constructed in the ordinary way. The pins do not appear to irritate the tissues, and Dr. Dall says that the first patient upon whom he tried the experiment was a lady from the country, who to this day does not know that the operation was in any way unusual. In the case of pins entering the sockets of extracted teeth his mode of procedure is very simple. The impression is taken the day after the teeth is extracted, and pins are attached to the model in the position they are expected to

occupy. They are left as long as possible, as they are apt to set up irritation and bring about absorption if too short. After the denture has been worn for some time the sockets become filled in about the pins, so that the adaptation is perfect, and in two cases he had been able to supply patients with upper dentures without palate plates. Dr. Dall has drilled ten cases in all, and in fifteen cases has inserted dentures with pins entering the sockets of extracted teeth, and in only one case has there been any suppuration, and that was quickly overcome by syringing with dilute carbolic acid and glycerine.

Proceedings of Dental Societies.

Royal College of Dental Surgeons of Ontario.—Official Report.

CLOSING EXERCISES.

An enthusiastic audience, in which the fair sex predominated, assembled in the lecture theatre of the Normal School, on Tuesday evening April 7th, to participate in the closing exercises of the above institution. Dr. H. T. Wood, President of the College, occupied the chair, and was supported on the platform by Prof. J. Taft, M.D., Dean of the Dental Department of the University of Michigan, Drs. J. Branston Willmott, W. T. Stuart, Luke Teskey and W. Earl Willmott, members of the College Faculty, and Dr. W. B. Geikie, Dean of Trinity Medical College; E. B. Shuttleworth, Dean of the College of Pharmacy; Dr. J. G. Roberts, of Brampton, and others. The proceedings were opened by prayer, led by Rev. Hugh Johnston, D.D., after which the President made a few introductory remarks, presenting interesting figures, illustrating the growth and present position of the college, and concluding with these words of advice to the graduating class: "Keep your hands clean, keep your hearts clean, remember the poor."

Dr. J. B. Willmott, Secretary of the Board, introduced the Graduates, and the diplomas and certificates were presented by the President as follows:—

Master of Dental Surgery.—Thomas Henderson, D.D.S., L.D.S.; W. A. Leggo, D.D.S., L.D.S.; O. H. Zeigler, L.D.S.

Licentiates of Dental Surgery.—H. D. Boyes, Thos. Coleman, W. F. Corbett, O. W. Daly, S. W. Frith, C. D. Green, G. H. Henderson, J. E. Holmes, E. R. Howes, C. W. Lennox, D.D.S.; C. H. Lount, O. Lillie, Jas. Letherdale, G. S. Martin, A. H. Mabee, Jas. McBride, H. S. McLaughlin, F. R. Porter, W. Richardson, J. J. Sinon, M. J. Sisley, H. J. Stingle, H. R. Thornton, D.D.S.; A. T. Watson, D.D.S.; J. E. Wilkinson, W. R. Winters, G. F. Wright.

The college medals, which are offered for special competition in practical work, including all the operations usually performed by a dentist, were awarded as follows :

Gold Medal.—W. F. Corbett.

Silver Medal.—Thos. Coleman.

Mr. J. F. Chittenden, on behalf of the Hamilton Dental Manufacturing Co., offered a dental chair, and a dental bracket, to the students making the highest and second highest number of marks in the final examination. These prizes were obtained by Mr. H. J. Stingle and Mr. O. Lillie.

The prize of 6 oz. of copper amalgam, to the student making the best copper amalgam fillings, kindly offered by Dr. G. H. Weagant, of Cornwall, was won by Mr. G. H. Henderson.

The prize men were introduced by Dr. W. T. Stuart, and the prizes were presented by Dr. Willmott, Dean of the Faculty.

Rev. Dr. Johnston, in a witty speech, urged the students to remember that the reputation of a college was not made by its fine buildings nor its learned professors, but by the character and ability of its alumni, and that it was in their hands to make or mar that reputation.

William Richardson, L.D.S. followed with an eloquent valedictory, which was well received and frequently applauded. (See page 82.)

The President, in introducing Dr. Taft as the speaker of the evening, said that, although this was the first time the Professor had appeared in Toronto, his name was a household word with the profession as that of one who for thirty-five years had stood in the van and had done perhaps more than any man on the continent to advance the science of Dentistry.

Dr. Taft, in acknowledging the warm reception accorded him,

desired to specially address the few remarks he had to make to the graduating class, who after a few years of preparation were about to enter upon the duties and responsibilities of their noble profession. They must be conscious that, however diligently they had striven to fit themselves for their calling, they were only now on the threshold of knowledge, in fact, the science itself was yet in a transient state. Referring to the immense advances which this century had witnessed in all branches of art and science, the speaker claimed that in no department had greater progress been made than in that in which they were most interested. Half a century ago little was known, and the literature extant was practically worthless. In 1839 the first dental periodical appeared, and to-day there were 125 regularly published. In 1840 the American Society of Dental Surgeons was established—the first of its kind—and now about 150 of these bodies are in existence on this continent, while every important centre of population in Europe has its local organization. Co-operation in association had been of inestimable service in bringing about the present condition of affairs, not only in facilitating the increase of knowledge and research, but in obtaining wise legislation and the establishment of legally authorized colleges and schools. Of these latter there are thirty-three in America, fourteen in England, and others in nearly every European country. With this grand record of the past, the speaker urged his hearers to press onward into the glorious future; the forces which had done all this are stronger and abler to-day than ever before. The dental profession was a battalion in the grand army whose mission it was to attack ignorance, darkness and disease, and carry knowledge and healing to suffering humanity; and those before him as individual soldiers in that battalion must ever strive to equip themselves thoroughly and fight earnestly and untiringly.

The learned Professor was listened to throughout with close attention, and only interrupted by frequent applause.

The proceedings, which had been enlivened at intervals by orchestral selections, were closed by the national anthem.

Royal College of Dental Surgeons of Ontario.

The School of Dentistry of this College has completed another year of successful work. The number of matriculated students in attendance was sixty-eight.

Lectures closed on March 2nd, and examinations before the Board of Directors and Examiners commenced the following day in the hall of the College of Physicians and Surgeons, Toronto.

The Examiners were as follows :—

Anatomy.....G. C. Davis, L.D.S., London.

Physiology.....C. A. Martin, L.D.S., Ottawa.

Chemistry.....J. B. Willmott, D.D.S., M.D.S., Toronto.

Surgery.....R. M. Fisher, M.D., C.M., L.D.S., Warton.

Materia Medica....H. T. Wood, M.D.S., Toronto.

Operative Dentistry.C. H. Bosanko, D.D.S., L.D.S., Barrie.

Dental Prosthetics..L. Clements, L.D.S., Kingston.

Thirty students presented themselves for final examination, of whom twenty-seven were successful. The names of these will be found in connection with an account of the closing exercises in another column.

Of those who went up for intermediate examination, the following were successful : R. Agnew, W. W. Alton, E. A. Billings, S. E. Braendle, F. C. Briggs, Joseph Brooks, W. A. Burns, S. R. Clemes, J. G. Coram, W. A. Crow, H. Darling, D. Davidson, Thomas Fairbairn, G. S. Fowler, E. S. Hardie, E. A. Harrington, George Hicks, H. H. Kinsman, H. G. Lake, James Loftus, R. J. Loughheed, W. E. Marshall, W. T. McGorman, G. A. McGuire, William McGuire, F. D. Price, J. C. S. Robertson, C. J. Rogers, D. E. Russell, G. D. Scott, E. B. Shurtleff, Colon Smith, R. J. Stevens, J. H. Turnbull, George Walters, C. H. Wartman, J. E. Wilkinson.

The "Act respecting Dentistry" of the Province of Ontario, makes it imperative that the examinations of dental students shall be conducted by the members of the Board as elected by the Licentiates.

For some time it has been recognized that a director might be of great value to the profession in that capacity, and yet not have all the qualifications for an efficient examiner.

When the Royal College of Dental Surgeons was affiliated with the University of Toronto, the possibility of holding joint examinations was discussed, but it was found that this could not be accomplished as the law then stood, unless the University would appoint as its examiners the whole Board of Directors of the Royal College of Dental Surgeons. This, of course, was not practicable.

In 1888 the Board consulted the Licentiates at the Biennial Meeting, as to the expediency of asking the Legislature for authority to appoint examiners, and the proposition was unanimously approved.

At the recent meeting of the Board, the Solicitor was directed to prepare an amendment to the "Dental Act" covering the ground referred to. This is now before the Legislature, in charge of Hon. G. W. Ross, and will doubtless become law in due time.

British Columbia Dental Society.

Pursuant to call, a convention of the dentists of British Columbia met in Victoria on the 16th inst., for the purpose of forming a Provincial Dental Society. There were present fourteen dentists out of a total of seventeen in the Province, and the proceedings were harmoniously carried out, resulting in the formation of the "British Columbia Dental Society."

A constitution and by-laws were adopted and the following officers were elected for the ensuing year: T. J. Jones, L.D.S., Victoria, President; C. H. Gatewood, D.D.S., Vancouver, 1st Vice President; A. J. Holmes, D.D.S., New Westminster, 2nd Vice President; Dr. A. C. West, Victoria, Secretary-Treasurer, and an Executive Committee composed of W. R. Spencer, D.D.S., of Vancouver, and W. J. Quinlan, D.D.S., and R. F. Verinder, M.D., D.D.S., of Victoria.

The object of the Society is mutual development, promotion of friendly intercourse, and to generally advance the status of the profession in the Province. Yearly conventions will be held, the next meeting to take place in Vancouver on July 17th, this year.

A. C. WEST, *Sec.*

Correspondence.

Letter From Dr. Truman W. Brophy.

CONSULTATION FEES, ETC.

The March number of the DOMINION DENTAL JOURNAL is just received. I find it filled with very interesting matter, and, therefore, I feel that the profession of Canada is to be congratulated on having at home so able an exponent of scientific dentistry.

The first, or leading article, from the pen of my friend Dr. W. C. Barrett, whose well-directed enthusiasm has on many occasions held the attention of the largest and most distinguished gatherings of dentists at home as well as abroad, will fill an important place in our literature. This article will make us all feel quite well acquainted with Dr. Miller, not only by reputation, but it really seems to establish intimate relations between us and our scientific friend.

The achievements of Dr. Miller may well call forth the applause of his countrymen.

The work he has done has contributed more to the scientific advancement of dentistry than all previous researches in this direction.

The warm friendship between Drs. Miller and Barrett, makes the article of far more than ordinary value. Personally, I feel under obligation to you for the JOURNAL, and to Dr. Barrett for the valuable article it contains.

An article from Dr. A. C. Cogswell, whose acquaintance I do not enjoy, and yet I feel that he is one of my brethren, and therefore I must know him, for do we not strive with the same problems, meet the same obstacles, and pass through the same experiences along the uncertain pathway of life? The article he presents on "Professional Advice" is of a nature to place many dentists in an attitude becoming professional men.

No dentist should do his profession so great an injustice as to habitually hold consultations with his patients without receiving a fee. Such a course, while no doubt quite prevalent, is far from elevating to dentists. It should be practised only in free dispensaries and hospitals. Among a few of the members of the profession of our city, hours for consultation and advice are announced on their

appointment cards, and during *those hours only* will the dentists see patients for consultation. Such a disposition of time makes it possible to see patients for short intervals, and, besides, what is of more importance, the dentist is not interrupted during the time he is engaged filling teeth, or performing other operations, which require careful continuous attention.

Nor is this all ; there is often an injustice done to patients by leaving them with rubber dam in place, in an uncomfortable position, while others occupy our time. This should not be so. There are some well-established rules of practice in other professions, which are equally as applicable to ours, and Dr. Cogswell has very tersely pointed them out. I trust members of the profession who *give* their time and the benefit of their professional knowledge to their patients during consultations, may see the injustice thus done to themselves, their families and the profession.

Whoever seeks the advice of a professional man does so for the purpose of benefiting himself, and there is no reason why a suitable fee should not be received by the consulted for the services rendered.

Many years ago a large class of physicians occupied about the same position that dentists do to-day in this matter.

It was, indeed, esteemed a compliment by them, to receive a visit from a citizen who desired medical advice ; and for advice alone, or for time occupied in consultations with other physicians, fees were not usually received.

A well informed dentist can do his patients, especially young patients, children, more good by advice than operations which involve great expense. If it were possible to awaken that interest in parents, which would induce them to consult a dentist with their children, and consult him frequently, much suffering would be avoided, besides the dentures of our people would very materially improve.

I have written more than I intended when I began this letter, but my interest in the subject has led me on.

Wishing the JOURNAL the highest degree of prosperity, which it so justly merits, and hoping that all our professional friends in Canada will attend our big dental meeting during the Columbian Exposition.

I am, fraternally yours,

TRUMAN W. BROPHY.

Personal.

Can any one tell us who is the oldest practising dentist in the Dominion?

The Buffalo Dental Manufacturing Co., of Buffalo, was burned out on March 10, 1891.

Just as we go to press, we learn with deep regret of the death of every dentist's friend, the revered genius, Dr. W. H. Atkinson, of New York. Dr. Atkinson was 76 years old January 23, 1891.

Dr. Hayden, aged 84, a son Dr. H. H. Hayden, who with Chapin A. Harris, founded the first Dental College, died in Baltimore last month. He had practised dentistry for forty years.

The "Commercial Exercises" of the various colleges in the United States have closed, with large class graduating lists. The past session will, perhaps, be remembered for the great number of its matriculates. May every honest graduate's honorable ambition be attained!

The Connecticut Valley Dental Society hold their annual meeting on June 10th, 11th and 12th, at Hotel Hamilton, Holyoke, Mass. Arrangements already completed indicate a most interesting and profitable meeting, Dr. Geo. A. Maxfield is the Secretary.

Our Corresponding Editor, and former Canadian friend and co-worker, Dr. W. R. Patton, President of the American Dental Society of Europe, sends a tempting invitation to the seventeenth meeting at Heidelberg, on the 3rd, 4th and 5th of August. We commend the meeting to any of our readers.

Editorial.

The Procession Growing.

The Dental Colleges in the United States have had in attendance during the last session, over 3,100 students. About eighty of these were from Canada.

Dental College Geography.

In the summary of matriculates in the Dental Colleges over the border, it is very odd to us to read as follows: Canada, 8; Nova Scotia, 2; New Brunswick, 2; British Columbia, 2; Prince Edward Island, 1.

It would be quite as wise, if in publishing the list we were to print: United States, 8; New York, 2; Pennsylvania, 2; Illinois, 2; Alabama, 1.

Practitioners' Course.

The Chicago Dental College Practitioners' Course will re-open on 1st June. This is a fine opportunity to rub up one's rusty knowledge.

The New Brunswick Act.

We have received (April 28) a reply from Dr. Murray, of Moncton, N.B., to an editorial criticism of the above Act. It has come too late for insertion in this issue, but will appear in the July number.

Nova Scotia Legislation.

At last the efforts of our co-editor, Dr. A. C. Cogswell, are bearing fruit, and we are glad to learn that the profession in Nova Scotia, are earnestly seconding him in the appeal to the Local Legislature for a Provincial Dental Bill. Dr. Cogswell writes us that they propose organizing a local Board of Examiners. It will likely be reserved for New Brunswick alone, of all the Provinces, to oblige their natives to go outside of the Province to get their education.

American Dental Colleges.

A good many of us have grown gray in dentistry, since the time when the Quebec Dental Board cut off from recognition two leading Dental Colleges in the United States, for granting diplomas in one short session of a few months to candidates who had never had a day's practice except as students, and who had no claim but their own "cheek" to be included in the qualifications for graduation in one year. We are still in possession of all the lively correspondence on that occasion, and the more we refer to it, the more confirmed we are that the Board did the right thing at the right time. It is a pity that there is no way of drawing the line between the D.D.S. as it was and as it is; because, much as we despise the degree as granted in hundreds of cases years ago, we must admit in all fairness, that a great advance has been made, and that the National Association of Dental Faculties, has revolutionized

the teaching and the system for the better. In the matter of the exaction of a high standard of matriculation ; as well as in the teaching in anatomy, physiology and chemistry, and the preliminary office studentship, we, in Canada, are really ahead of our cousins, but it is only fair to confess that it will be a long time before we can afford the facilities for practical work the United States Colleges enjoy. If any error exists in their curriculum, it is that students get the idea of being "practical men" much too soon. The basis of the highest dental education cannot condemn the fundamental principles of medicine and surgery, as well as of mechanics. We recognize with much pleasure, the determination of our best teachers in the United States Colleges, to leave nothing undone to improve the standard. They are away ahead of the world in practical teaching. There is no reason why they could not, at least, keep pace with it in the exaction of a classical and mathematical matriculation, so that the next generation of practising dentists would represent scholarship as well as practical science. But it would be well if students in their first year were prohibited from any clinical dental work whatever, and obliged to devote the entire first session to more thorough training in anatomy, physiology, chemistry, and materia medica. Doubtless, this will be one of the results of the new *regime*.

Reviews.

The *Pacific Dental Journal*, published by the Tacoma Dental Depot, Tacoma, Washington. This is the latest addition to the list of Depot Dental Journals. It is a quarterly.

Pearson's Dental Appointment Book for the vest pocket. Published by R. J. PEARSON & CO., Kansas City Dental Depot, Kansas City, Mo. Neat enough to open before a king. Handy enough to suit the man who is always leaving a bulkier book where he often loses it. Arranged to save time, trouble and patience. 50c. With name on cover, in gold, 75c.

The Genius (?) of Colonel Ingersoll. By R. BEALL, D.D.S. The author sends us a copy of this *brochure*, and asks for a review. It is written by a fool, about a fool, and any man who would put

aside good literature to read such trash would be a fool. Ingersoll was a bolder blasphemer of the Creator than he was a soldier. When this gallant "Colonel" went on his first and only skirmish down to Dixie, he allowed himself to be taken prisoner, and General Forest, learning who he was, offered to exchange him for a mule! He was a coward who ought to have been shot, and it was well for the cause of the men of the North that there were so few like him. The Almighty creates men like Ingersoll for some such hidden purpose as he creates skunks and mosquitoes. Even the skunk when dead is of use. Alive, Colonel Ingersoll was a curse. Dead—no doubt he will discover that fact for himself. Dr. Beall will excuse us for reiterating the statement, that in posing as an admirer of a fool, he might exchange his D.D.S. for ASS.

Catching's Compendium of Practical Dentistry for 1890. By B. H. CATCHING, D.D.S., Editor and Publisher, Atlanta, Ga. Copyrighted 1890. Atlanta, Ga.: Constitution Publishing Co., 1890. Price \$2.50.

"What is it all about?" That is just what we all wondered; and one has only to get the work of 259 pages to find that in getting an answer, he is practically in pocket a good many dollars; and that Dr. Catching has been garnering the best things in operative and prosthetic dentistry, crown and bridge work, orthodontia, dental medicine, oral surgery, etc., that have appeared in nineteen American, three British, five French, six German, one Austrian, two Cuban, two Italian, one Russian, one Spanish, one Swiss, and one Canadian Dental Journal for 1890. It is, in fact, a valuable compendium for the two classes of people in our ranks—those who read much and those who read little. It will refreshen the memories of the former, and revive the dulness of the latter. It will certainly add a new zest to each new year, in the expectancy of an annual successor.

A Dictionary of Dental Science. By CHAPIN A. HARRIS, M.D., D.D.S. Fifth edition, carefully revised and enlarged, by F. G. S. GORGAS, M.D., D.D.S., Author of "Dental Medicine," Editor of "Harris' Principles and Practice of Dentistry," etc. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street, 1891. Price \$5, cloth; \$6, sheep.

Of some books there may be too many editions; of this dic-

tionary there have been too few. The plodding dental student of the past ten years was to be pitied, as he dived into old editions in search of terms and technicalities belonging alone to dentistry, and of brief explanations of the many additions to our knowledge of *Materia Medica*, the researches of Millar, etc. There has, perhaps, been no one work more missed by college students than this classic dictionary, and had its industrious author thrown further light upon the bacteriology of the mouth, of which dentists know too little, and condensed the lengthy descriptions of celluloid, extraction, the gums, etc., to which nothing has been added that was not known a quarter of a century ago, it would have, perhaps, been better. However, the man who once tried to satisfy everybody not only satisfied nobody, but died prematurely of softening of the brain, and when one considers the pruning as well as the additions Dr. Gorgas has made in this fifth edition, nobody but a chronic croaker would peck at flaws where there is so much solid fruit. The work is unique in dental literature in never having had a rival. In Dr. Gorgas' hands it never needs one. To our boys, and to the old ones, too, we need only commend the work as a good old stand-by. The publishers never issue inferior works. This is "as usual."

Strange Evolution in Women's Dress—Will American Ladies Dare Adopt it?

Some predict that the great change in the fashioning of the clothes which are to be worn by women this coming season is the most wonderful victory of the nineteenth century—if fashion leaders can be induced to adopt it, and appear just once in public so arrayed.

Men will hold their breath in wonder at the marvellous change it makes in lovely woman. "Few of the fair sex can help being beautiful in these glove-fitting costumes," says a writer in a recent number of *The New York and Paris Young Ladies' Fashion Bazar*. "This magazine is the only one in Europe or America which makes a specialty of giving those inclined to stoutness an unrivalled appearance of sculptured slimness," said Her Royal Highness the Princess of Wales. Madame Patti has ordered from the Paris house, four magnificent costumes, the designs of which appear in the April number of this *Fashion Bazar*—and in this magazine only.

Mrs. Harrison is greatly fascinated with the exquisite gem, costume No. 4, in the April number. It is expected she will give an order for an exact counterpart of it, the whole front of which will be incrustated with pin-head diamonds. This gown alone will be worth a king's ransom.

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No. 4.

Original Communications.

Dental Dots Distilled.

By D. V. BEACOCK, L.D.S., Brockville, Ont.

Any dentist can draw the temper of his separating files by passing them through the flame of a spirit lamp till blue; they will then be nearly equal to the new flexible files lately brought out, and can be bent into almost any curve desired.

Get three or four pieces of hard wood turned to fit your lathes; have one round like a marble, the others cone-shaped, size to suit yourself; give them a thin coat of Spaulding's glue; sprinkle emery all over them while wet; lay by till thoroughly dry. These, made with different grades of emery and used dry, last a long time, and are easily renewed; they cut a plate down rapidly, and are much safer than burrs.

Celluloid disks, used at the back of sandpaper disks, serve to stiffen and keep them in shape, and adds to their cutting qualities. Any dentist can make them out of thin celluloid sheets, to be had at any milliner's store. Strips of the same material, used with fine corundum powder, make the strongest polishing strip I have ever used; the celluloid should be the rough or unglossed kind, as it holds the powder much better than the glazed or highly glossed.

A piece of aluminum wire makes a very handy carrier for convey-

ing iodine, aromatic acid or any corrosive agent, except muriatic acid. It answers the same purpose as gold or platinum, being non-corrosive, soft, pliable and clean ; can be bent or formed into any shape and only costs a trifle.

Aluminum wire is very useful for many other purposes in the dental office, such as strengthening rubber plates, pinless teeth, making canal points, etc. I have lately had made to order, some aluminum wire gauze for strengthening rubber plates—it works nicely ; by covering the model with gauze and packing rubber over it we can make much stronger plates, the rubber is tougher and more evenly vulcanized, and what is better, it is not such a non-conductor as an all rubber plate. This gauze is so soft and pliable that it can be easily fitted on any model by merely pressing it with the fingers.

What Is a Man To Do?

By "XENO," Ont.

At the graduating exercises of the class of which I was a member, I was particularly struck with a few sentences used by the Dean of the Faculty, viz.: "There will come times of discouragement, times when everything seems to go wrong, times when receipts are small and expenses are large. *These are the times that try men's souls.*

"But keep right along, and do not let yourself be tempted during these trying times to do anything unbecoming a dentist ; do not condescend to do unprofessional things in order to gain practice."

The advice was timely, and I have no doubt every member of that class has had more or less of "the times that try men's souls."

I don't suppose I meet more of such things than other practitioners, but I sometimes feel like "boiling over." A case or two will illustrate :

1. A short time ago a lady brought a little girl to me, about four years old. The child's upper lip was badly swollen. The mother said that the lip had been swollen for about ten months. The usual "gum-boil" was there. She had taken the child to a "Doctor" some months before ; he gave her something to rub on, to take the

"gum-boil" away. But, strange to relate, it did not go away. Some hard substance appeared through the gum under the lip; this, the Doctor told her, was a new tooth. When I saw the little patient I noticed that the crowns were off both centrals. Alveolar abscess, with fistulous opening, had resulted. Some pressure had probably forced the root up into the alveolus, and the apex came out through the opening. The end of the root had entered the lip, and was gradually working its way through, causing excessive pain and swelling. With an excavator I removed the root, and the trouble disappeared.

2. A young lady, sixteen years of age, was troubled with a lower molar. She went to a Doctor, who, on examination, saw that the tooth was badly decayed. There was some slight swelling. He advised her to poultice it, and she did so. The abscess broke externally in the region of the sub-maxillary gland, and to-day there is a large cicatrix, which looks very bad.

Such cases as these cause a man to ask himself, "When will medical men learn that there is a profession called Dentistry?" Can medical men not afford to say, "We don't know very much about teeth, you had better go to a dentist?" If medical students were advised by their lecturers and professors to leave teeth alone altogether, much of the injury done might be averted.

Of course, in such cases, a poor dentist dare not criticise the action of a general practitioner, and any advice he gives contrary to that already received from the Doctor is accepted with a good deal of suspicion. It would not be *professional* to tell a patient, "I'm supposed to know more about teeth than a general practitioner." Oh, no! we must just sit and listen, and give a patient (who says Dr. — told her this, that, or the other thing) to understand (by our silence) that Dr. — is all right, and we are all wrong. Mr. Editor, what is a man to do? The action of medical men is taking hundreds of dollars out of the pockets of the dentists of this country, making "receipts small," and almost forcing many young men to advertise "cheap extracting," in order to save themselves (from bankruptcy) and the people's teeth.

Do not say, "Time will remedy all these things," for "Life is too short, and time too precious."

Compound Fracture of the Alveolus and Maxillary.

Read before the Odontological Society of Quebec.

By C. H. WELLS, L.D.S., Huntingdon, Que.

In attempting to bring forward this subject this evening, I feel very much like the man that was shipping coal to Newcastle, but, from what I see from different parts of the country, I feel encouraged to think that I may say something that will be of use to some one, and, if so, I shall feel that my object is attained.

The first case to which I will invite your attention is that of Robert Lumsden, of Athelstan, P.Q., at that time eight years old.

This is a compound fracture of the lower jaw, from the effects of a blow of a club, which struck the jaw to the left of the centre, coming end-wise, the centre of the blow being just in front of the canine, and causing a complete fracture between the second temporary molar and the six-year molar, on the left side; also another at the canine, or between the canine and the first molar; and another, between the right canine and the lateral incisor; and the fourth, between the second molar on the right and the first molar. Then there was another fracture, extending from one of the fractures at the canines to the other, thus breaking the alveolus with one canine and four centrals completely out, which the mother brought me in her hand. After examining the case carefully, I consulted the physician who had brought them to my office, and he proposed that we disjoint the lower jaw entirely, and take it out, as he did not think it possible to save it. I thought that I could make an improvement on that. I gave the patient æther, got the fractures reduced as near as possible to their proper places, and had them held in place by assistants until I took a wax impression, when I made a capping plate to fit over all the lower teeth, which, you will remember, were all knocked out but the two permanent molars. I replaced them all but one lateral incisor, where the socket was gone altogether, and I left it out, which I much regret, as I saved all that I put in, and I believe might have saved that one also. I then riveted a V-shaped piece of plated steel to the capping plate, passed a bolt down through the head of the V, soldered it fast there, and carried it down through an iron

plate well padded underneath the jaw. On this bolt I put a thumb-nut, that could be loosened or removed at will; this I allowed to remain three days, rinsing the mouth with antiseptic washes. I then removed it carefully, and rinsed the mouth well with antiseptics, and at the end of the first week the patient was living on fairly solid food. After this I only removed the plate once a week. At the end of the fifth week I removed the plate altogether, and discharged the patient. Strange to say, he has since erupted his bicuspid and canines, and they all came all right; also the second molars are in their proper place and position. The enlargement of the bone at the fractures is very slight, so slight that you would not notice there had been anything wrong.

The second case is that of Archie McEwan, of Ormstown, P.Q., who came to me on the 8th of April last; he had been kicked by a horse five weeks before, and had been attended by two eminent surgeons. The only teeth he could make meet together were the lower right canine on the outside of the first superior bicuspid, the molars and bicuspid of both sides of the mouth being outside those of the upper jaw, and on the left side; when the right were touching, they lacked more than one-fourth of an inch of coming up to the upper ones. I found the union so strong that I did not dare to break it again for fear of not getting a union, and so decided to draw them into place with pressure. I first passed a strong rubber round the two bicuspid on the right and the canine, also another over the second bicuspid on the right and the first molar on the left. At the same time I passed a very strong one round the central and lateral on the left, and the two bicuspid, on the same side. The patient wore this arrangement from 9 a.m. until 6 p.m., when I had the spaces nearly closed on the right, and completely on the left. I then took an impression, and made a capping plate similar to Lumsden's, but cutting the plaster teeth short on the right, and padding heavily under the left side, thus giving it a constant twisting pressure. This the patient wore for five days, and then returned with the articulation much improved, and in the condition shown in the plaster cast, having taken it off twenty-four hours before. You will observe that the molars and bicuspid of the right side were again springing out. I then passed another strong rubber band round the bicuspid on the right, and the first molar on the left, and in four hours had them again in

their proper position. I then tied the two bicuspid's firmly to the canine and lateral, and left this ligature there two weeks. The patient objecting to wear the plate and pads, on account of its inconvenience, I then fixed a bandage, cutting out a three-inch piece from the centre, and sewing to either end of this two six-inch pieces of the strongest elastic that I could get; then sewed the other pieces to this. My arrangement was complete. I then put the centre between the elastics under the chin, brought them up the side of the face over the top of the head, crossed them around to the back, passed them forward to the point of the chin, and sewed the ends together, and attached the bandages together at the side of the face, thus holding the whole bandage in position. The patient wore this about two weeks, which left his articulation the same as before the fracture. Everything was then taken off, and all remained in position, the patient being a little weak for a time.

The third case is that of David Armstrong, of Front River, N.Y. This is a case of a man thirty-eight years of age, and was caused by the kick of a horse. There were three fractures, although only two went completely through; the one on the left, as indicated by the pencil marks, united in fairly good position, but the one on the right was bad, as shown by the cast. The front end of the right side was thrown out and up so much, so that the only teeth that would meet at all were the lower canine and the first superior bicuspid; this is the position in which I first found it eleven weeks after the accident, and firmly united in this position. This case I treated with the capping plate, combined with the same apparatus as Lumsden's, moving the teeth inward on an inclined plane, and padding heavily on the left side, and keeping the screw well tightened. In ten days I had them in perfect position, and kept them there afterwards with dental floss ligatures, holding them this way for about three weeks, which proved a perfect success.

[Dr. Wells exhibited casts and photographs of the cases.]

Extracting Teeth.

By W. H. SUTTON, L.D.S., Magog, Que.

While condemning, as a rule, the extraction of teeth which prevails to such an extent in larger cities, it is not possible that their extraction will ever become out of place, and it is important to make this matter as easy as possible, with as little pain to the patient and as little labor to the operator. Some of our oldest operators still adhere to the use of the key and the elevators, and in spite of our objections to them, very skilful operations have been performed by them. My late father for nearly half a century used these instruments, and he never had an accident; and I believe there are enough operators to-day using the elevator to make it worth the while of the depots to add new forms and keep old forms in stock.

In my practice in the country with my late father for over ten years, I used only a few forceps for all cases, as I found that I could accomplish all I needed with four or five.

1. The bayonet forcep.—This is one of the most important of our extracting instruments, and can be made to do good work as well in the lower jaw as in the upper. It should not be too long in the handle, and should have both ends of handle bent or curved so as to make it easy of adaptation to the palm of the hand.

If the patient is placed on a stool, or if the dentist stands on one, this forcep can be used for roots of lower bicuspid and molars; sometimes, too, when the jaws are partially closed by inflammation. When the *denta sapientiæ* are developing, the easiest way to reach them often is by the bayonet forcep, when by slow movement they can be extracted.

2. Many dentists find the ordinary forcep badly adapted for the hand, and it is a common thing to see dentists placing a ball of cotton in the hollow of the hand to get a solid grip of the forcep handle. I am bothered with this difficulty myself, and I beg respectfully to present my means of overcoming the trouble. I place on one of the handles a rubber bulb, which adapts itself to the hollow of the hand and gives me a steady hold, and takes away the spring which is found in many handles of American forceps.

3. It is often a useful thing to place a cork gag between the teeth

before extracting a difficult lower tooth. The movement of the lower jaw is frequently so pliable that it is not easy to control it, and a steady gag assists the operator, and prevents accidents by striking the upper teeth in the last action of extraction. It seems to be a relief to the patient, as he has not that sense of fracturing a part which so many people feel in having difficult teeth extracted.

4. After extracting abscessed roots and teeth associated with large gum-boils, it is a good precaution to rinse the mouth immediately with a hot solution of water and salt, or water and carbolic acid ; and in deep-seated abscesses it is wise to syringe the sockets with peroxide of hydrogen, to cleanse the pus away. The instruments should be thoroughly disinfected by cleansing them in a five per cent. carbolic acid solution. There is a great danger of infection from dirty forceps. Blood poisoning may occur from unclean instruments.

Proceedings of Dental Societies.

Ontario Dental Society — Annual Meeting.

The third annual meeting of the Ontario Dental Society will be held in the Council Chamber, Barric, on Tuesday, Wednesday and Thursday, July 21st, 22nd and 23rd, 1891, commencing on Tuesday, at 2 p.m.

All licentiates who sign the constitution and code of ethics of the Society are eligible for membership, and are cordially invited to be present.

Officers : President, N. Pearson, Toronto ; Vice-President, C. V. Snelgrove, Toronto ; Secretary, C. H. Bosanko, Barric ; Treasurer, A. W. Spaulding, Toronto.

Committee of Management : J. W. Oakley, J. B. Willmott, R. B. Burt, C. V. Snelgrove, A. W. Spaulding, N. Pearson, C. H. Bosanko, R. G. McLaughlin, *Secretary*.

PROGRAMME.

TUESDAY AFTERNOON, 2 O'CLOCK.

1. Reading of the Minutes.
2. Enrolling of Members and Payment of Fees.
3. Election of Officers and Reports of Committees.
4. Adoption of Constitution and other General Business.

EVENING SESSION, 8 O'CLOCK.

5. PAPER—"Dental Legislation," W. GEO. BEERS, Montreal.
Discussion opened by GEO. DAVIS, London.
6. Retiring President's Address.

WEDNESDAY MORNING, 9 O'CLOCK.

7. PAPER—"Treatment of Deciduous Teeth," W. A. LEGGO, Ottawa.
Discussion opened by THOS. HENDERSON, Toronto.
8. PAPER—"Root Filling," J. G. ROBERTS, Brampton.
Discussion opened by W. E. WILLMOTT, Toronto.
9. PAPER—"Diseases of Antrum," S. WOOLVERTON, London.
Discussion opened by R. M. FISHER, Warton.

AFTERNOON SESSION, 2 O'CLOCK.

10. PAPER—[Subject not announced] C. N. JOHNSON, Chicago.
Discussion opened by J. B. WILLMOTT, Toronto.
11. PAPER—"Pyorrhea Alveolaris," F. KILMER, St. Catharines.
Discussion opened by J. G. ROBERTS, Brampton.
12. PAPER—"Sensitive Dentine," G. A. RICHARDSON, Toronto.
Discussion opened by JAS. STIRTON, Guelph.

EVENING SESSION, 8 O'CLOCK.

13. PAPER— { "Obtaining Correct Occlusion for Artificial Dentures," C. H. BOSANKO, Barrie.
Discussion opened by C. P. LENNOX, Toronto.
14. PAPER—"Crown and Bridge-work," J. E. LOW, Chicago.
Discussion opened by A. H. HIPPLE, Stratford.

CLINICS.

THURSDAY MORNING, 9 O'CLOCK.

1. "Operations," G. N. JOHNSON, Chicago.
2. "Crowning and Bridge-work," J. E. LOW, Chicago.
3. "Obtunding Sensitive Dentine," .. { 1. C. P. LENNOX, using Hot Nitrous Oxide Gas.
A. W. SPAULDING, " " " "
2. C. V. SNELGROVE, using Ether Spray.
4. { "Exhibition of Difficult Regulating cases from different offices," } Demonstrated by N. PEARSON, Toronto.

Eastern Ontario Dental Society.

The twelfth annual meeting of the Eastern Ontario Dental Association will be held at the Revere House, Brockville, July 2nd and 3rd. The following is the chief business, but several papers, etc., are expected.

"At the last meeting of the Association the following resolutions were unanimously adopted :

"1. *Resolved*, That it is the opinion of the Association that the Dental Act be so amended that the election of the Board of Directors of the Royal College of Dental Surgeons of Ontario shall take

place by ballot, forwarded by mail on a plan similar to that adopted by the medical profession.

"2. *Also resolved*, That a member of the Faculty of the Royal College of Dental Surgeons at Toronto shall not be eligible for membership on the Board of Directors.

"3. *Further resolved*, That no medical graduate be appointed examiner in the Royal College of Dental Surgeons, unless he is in actual practice as a dentist.

"It is the duty of all dental practitioners in the Province to use every legitimate means possible to procure legislation which would ensure better government for the School of Dentistry at Toronto, consequently you are earnestly requested to be present at this meeting, when the subject will be fully discussed."

Dental Associations, Province of Quebec Board of Examiners.

"Still they come! And where are they all to settle?" That seems to be the question year after year as the Board sends new men into the field of labor. It is a suggestive fact that from Quebec city to Gaspé, a stretch of 450 miles by sea—Gaspé district alone having a population of about 40,000—there is not a single dentist, and no such demand for other services than extraction, as to justify a dentist even in going there as an itinerant. The peasantry are not only in pagan darkness as to the advantages of modern dentistry, but they are mostly too poor to encourage more than the local physicians, who do all the dentistry they require. So, of course, our new-fledged licentiates flock to the cities. When the first dental journal was issued in Montreal, there were just eleven dentists in the city, and they flourished financially. To-day, the list is creeping up to sixty, and only strong constitutions keep several of them from perishing of starvation. It is a credit to our humanity, that so many people are moved to enter a profession, solely for the love they bear their fellow-men, not at all from love of lucre. If they cannot obtain a palace, or even a good stone-front on earth, they feel they are assured of a mansion in the skies.

The annual meeting of the Dental Board was held on the 13th and 14th of May, in Laval University, the full Board being present. W. Geo. Beers, President; Ed. Casgrain (Quebec), Vice-President; J. H. Bourdon, Secretary; S. Globensky, Treasurer; S. J. Andres, Registrar; A. W. Hyndman (Sherbrooke), C. H. Wells (Huntingdon). The examinations were divided as follows: Anatomy, Ed. Casgrain; Physiology, W. G. Beers; Chemistry and Metallurgy, A. W. Hyndman; Operative Dentistry, S. J. Andres, and C. H. Wells; Mechanical Dentistry, S. Globensky; Anæsthetics and

Hygiene, J. H. Bourdon ; Orthodontia, Ed. Casgrain ; Pathology and Therapeutics, W. G. Beers. The preliminary practical examinations had been conducted for several weeks previously. The result of the examinations were as follows : Passed as Licentiates of Dental Surgery, Arthur H. Beers, M.D.C.M. (McGill), D.D.S. (University of Pennsylvania), Montreal ; J. G. Globensky (Montreal), W. H. Sutton (Magog). Passed in all the primary branches, E. T. Cleavland, D.D.S. (New York Dental College), Danville ; J. H. Symons (Waterloo), L. J. Franchere (Montreal). In Physiology and Chemistry, O. Pichette, A. W. Gelinas (Montreal). In Physiology, Jos. G. Lemarche (Montreal). In Anatomy, Robt. L. Watson, C. Hepburn (Montreal). The primary students were permitted to appear for one or more of the primary branches, as they preferred ; but in future students must present themselves for the full primary.

The final students were, for the first time, obliged to make the following declaration :

I, ———, Licentiate in Dental Surgery, do solemnly promise and swear, that I will, to the best of my ability, uphold the honor and dignity of the profession, and adhere to the by-laws and rules of the Dental Association of the Province of Quebec.

The registration fee for students was made \$10.

The Odontological Society of Quebec.

The last meeting of the Association was held at the Balmoral Hotel, when Mr. Lanthier, of Three Rivers, read a paper on "Reflex Neuralgia," chiefly confined to a description of the anatomy of the fifth pair of nerves.

The members then adjourned to the annual dinner, the following members being present : Messrs. Berwick, Barton, Gendreau, S. Globensky, Brosseau, Kerr, Fitzpatrick, E. B. Ibbotson, J. Ibbotson, Bourbonnais, Lovejoy, Pepin, Brown, Bazin, Franchere, Gentles, Bourdon, Maufette, Lanthier, Hyndman, Beers and Geo. Weagant (of Cornwall). After the toast of "The Queen" was honored, Mr. Lanthier proposed that of the "Board of Examiners," to which the President of the Board replied. Responses were also made by the Secretary, J. H. Bourdon, S. Globensky, and S. J. Andres. The latter referred very aptly to the misapprehensions of the dental law, and the necessity of Licentiates familiarizing themselves with its provisions. More discrimination was needed in the selection of students. The speaker then proposed the toast of the "Odontological Society." Dr. Berwick made an excellent address in reply, from which we make the following extract :

"As members of the Dental Association of the Province of Quebec, in this Society, we have a great work to do. We have to maintain the dignity of the profession which we have chosen, and to which we are devoting our energy and strength, now we are assailed by many foes; foes who sacrifice their profession for individual gain, who have entered the profession with the expectation not of making it a better profession, and having it occupy a place as it should, as a specialty in medicine, but have entered it to get as much as they can out of the profession and their patients. They are like the barbers and charlatans of old, who were not satisfied in extracting their victims' money, but took from them their very life's blood, and sprinkled it on their white door posts, so as to make their ghastly work more conspicuous, and thus attract more victims.

"I was in hopes that this had all passed away, but in our profession and in our time, 'to-day,' we see not barbers, if they do stand beside a chair, but quacks, resorting to much the same thing. They take from their victims those organs we all prize so much, whose function in part is to prepare the food that we eat that it may become blood, and then, as the barbers of old, they hang them about their doors so they will be more conspicuous, and thus attract more victims, or they even get pictures of them printed on cards and hire innocent children to distribute them about our streets.

"Gentlemen, we who love and respect our profession must look to it closely, and see that none such sneak under the banner of this Society."

Messrs. Hyndman, Weagant and others, also replied. J. A. Bazin made the following remarks: "Mixed with the great pleasure of being present at this large gathering of the members and friends at our first banquet, I feel a deep regret at not having with us my two most truly co-workers and fellows in years, Drs. Trestler and Brewster. We thus unite, in a marked degree, the Present with the Past. I am reminded, as I recall the circumstances of our early professional life and the worthies that were then in the fulness of their labors, of that notable group of Hiram Powers, the 'Picket Guard.' Their figures in uniform in the forefront, alert, watchful, and determined, in various attitude, but all ready for the call of duty. And, sir, it seemed fit that, as the 'elder brother,' I might take the liberty and privilege of being garrulous and prolix, and recall that little vanguard that we found 'on call' in those days of the 'fifties.' Scripture, a good name and of excellent repute. Spooner, whose name is in all the text-books as the discoverer of the use of arsenic as a pulp destroyer, and whose work may still be found in the mouths of our older citizens. These had just passed to their reward when we began our professional life. But these others—Paine, Elliot, Dickinson, who succeeded Spooner, Bernard, Webster, Webb, Jourdain, Bowker, Van Buskirk—we knew in the flesh. I recall with tender memory my friend, as I can truly call him,

Elliot, whose remarkable genius as an inventor, and whose skill as an operator made him a peer with any. I remember one mouth in which his skill was displayed with smooth points and 'Abbeys' soft gold; when as good contour work was done as is done to-day. You will also find in journals, away back in the 'forties,' articles from his pen that prove his ability in theory. He left Montreal in '56 to engage in invention, and his name is not infrequent in the Patent Office at Washington. Time will not permit me to enlarge upon all those earnest and faithful ones, but I cannot close without a word in praise of Jourdain the 'neat,' a gentleman of the ancient sort, gentle and kind, whose office, workroom and person were as a lady's *boudoir*. With such noble examples as pioneers, may not those now on guard look to you who are present, and to all who are in or are about to enter the profession, to be true men, worthy of such examples and the heritage left us? May I not call upon you to take higher ground and more advanced position than they or we have? Consider that it is within my time that Dental Depots originated. Those older dentists will tell you how they had to make many of their own instruments and supplies. Now, a post-card sent and in a few hours all the needs and fancies of the most exacting dentist are within his hands. Then, 'close communion' was the rule, and if one did not keep his talent in a napkin, he took pains that he alone got the increase. And so, Mr. President and gentlemen, standing on the outer line, and through experience on a higher plane, I look upon a broader expanse and see a future for the profession of Dentistry in the city and Province, pregnant with a richer and more abundant fruitage for conscientious toilers for the best thought and deed. See to it that your sons can rise up in the days to come and give you praise. Let there be no going back, but ever forward, emulating in professional, public and private life the noblest qualities of our predecessors. Wishing you all a larger prosperity and an abundant field of usefulness, I thank you for your patience."

Songs were contributed by Messrs. Bourdon, Bazin and Franchere, and the meeting closed with "Auld Lang Syne" in English and French, and "God Save the Queen."

Connecticut Valley Dental Society.

The twenty-seventh annual meeting was held in Holyoke, Mass., on the 10th, 11th and 12th of last month, and was not only large but lively. Dr. E. S. Gaylord in the chair, and his active officers in attendance. After the usual routine business, on Wednesday evening, some objections were made to the advertised clinics of Dr. C. H. Land, and a resolution passed to withdraw the countenance

of the Society strictly within the code of ethics ; the proposed clinic was an error on the part of the committee, but codes of ethics while invaluable and necessary, may, on an occasion like this, become ridiculous as well as tyrannical, and it was evident that the meeting would become as hot as the weather if the resolution was not rescinded. The following day this was done, though a resolution was passed objecting to Dr. Land's methods of doing business. However, objection might as reasonably be made to the "methods of the depots." Dr. Land has spent \$16,000 perfecting his inventions, and does not pose either as a fool or a philanthropist, and while freely exhibiting and teaching his methods, he expects to be recouped.

The Dental Society sat in the forenoon at Holyoke, attending the clinics in charge of Dr. L. D. Shepard, of Boston. The operations consisted of rapid gold filling, gold filling, using soft and cohesive, plastic gold filling, porcelain inlays, crowning teeth with living pulps, bridge-work, enamel work, and others interesting to the profession. The afternoon session had a good attendance, many having arrived from surrounding places during the forenoon. Drs. F. J. Wilder, of Adams, and Henry McManus, of Hartford, were elected to membership.

The annual election of officers followed with this result : President, Dr. George F. Harwood, of Worcester ; Vice-Presidents, Drs. F. W. Williams, of Greenfield, W. H. Rider, of Danbury, Ct. ; Secretary, Dr. G. A. Maxfield, of Holyoke ; Assistant-Secretary, Dr. A. J. Cutting, of Southington, Ct. ; Treasurer, Dr. W. F. Andrews, of this city.

Dr. L. F. Shepard, of Boston, then presented to the Society the mallet which the late Dr. Flavius Searle, of this city, used all his life in his office operations, to be used as the gavel of the Society. It was accepted by President Gaylord, and a vote of thanks was given to the donor, Miss Searle. Dr. E. A. Stebbins, of Shelburne Falls, then presented a paper on "What value has *argenti nitras* as a therapeutic agent in dentistry?" The paper treated of the effect of nitrate of silver on organic matter, and the doctor gave the results of his experience with instructions how to apply the nitrate. Dr. Stebbins had several young patients before the Society, and their mouths were examined by those present. Dr. Land, of Detroit, made an interesting statement of his experiments in the same direction. Dr. Stebbins was kept busy for half an hour answering the questions of the members. Dr. Shepard, speaking of the morning clinics, thought an improvement had been made on former methods. The next half-hour was consumed in miscellaneous discussion.

The members were richly rewarded by Dr. Land's clinics. One patient, aged twenty-one, was a most interesting case. On the superior jaw the four incisors had crumbled away to within one-

fourth of the gum, no enamel on the labial surface, but partially covered on the lingual. The canines were deformed, and the enamel full of pits and depressions, the right and left second bicuspid, also the left first molar had been extracted. The right first molar was devoid of enamel. On the inferior jaw, the labial surface of the incisors were only partially covered with enamel; the canines, same as the superior, large cavities in second bicuspid and molars, pulps dead in right second bicuspid and second molar, and left second bicuspid and first molar. The bite was very short, lower incisors sticking on the ends of the superior. Dr. Land "jacketed" the six anterior teeth of both jaws with enamel jackets, increasing the width of the bite in order to make room. Gold caps, compound porcelain bridges, porcelain filling, amalgamated porcelain sections, gold sections, etc., combined in the hand of the Doctor to make a useful and fine looking denture out of a broken-down condition in both of jaws. Dr. Land was assisted by Dr. Capon, of Philadelphia.

The clinics under the charge of Dr. L. D. Shepard, of Boston, were made particularly valuable by the splendid way in which the Doctor organized and marshalled the members. Everybody in turn saw everything, and Dr. Shepard personally drew attention to the leading features of such clinics. Dr. Geo. Young, of Concord, N.H., gave an illustration of rapid gold filling, inserting the gold in a large crown cavity without the rubber dam, in less than seven minutes. Dr. W. R. Blackstone, Manchester, N.H., did some very fine operations with soft and cohesive gold. Dr. W. L. Roberts, Weymouth, Mass., with plastic gold. Dr. B. C. Russell, Keene, N.H., exhibited his method of inserting porcelain inlays; also Dr. G. F. Harwood, Worcester, Mass.; Dr. P. T. O'Reilly, Holyoke, showed some excellent bridge-work in the mouth of a patient. Dr. F. Bliven, Worcester, Mass., bending piano wire, also amalgam restorations; Dr. C. A. Timms, New York, enamel inlays; Dr. J. F. Adams, Worcester, Mass., demonstrated the use of the matrix in filling large buccal cavities. Dr. S. S. Stowell, Rittsfield, Mass., gave interesting demonstrations of his method of inserting porcelain crowns, etc. We hope to give extracts at another time from the papers read. Dr. Geo. A. Maxfield, the Secretary, and the Committee may congratulate themselves on the success of the meeting.

Legislation in Nova Scotia.

Dr. A. C. Cogswell has, with the assistance of his *confreres*, consummated his long efforts to secure legislative protection for the profession and public of Nova Scotia. The Act was assented to on the 19th of May last.

The following are appointed Trustees: Alfred Chipman Cogswell, William Clark Delaney, Hibbert Woodbury, Frank Woodbury, James Albert Merrill, Arthur Wellesley Cogswell, Robert William McDonald, Raymond Hays Mulloney, Charles Henry Fluck, Clarence Ulysses Smith, Cyrus Kingsbury Fisk, of Halifax; C. S. Marshall, of Liverpool; George Hyde, M. K. Langille, of Truro; A. J. McKenna, John Edward Mulloney, of Kentville; J. R. Fritz, of Digby; Charles E. Wolf, of New Glasgow; Frederick William Stevens, of Dartmouth; W. A. Payzant, of Wolfville; A. C. Harding, of Yarmouth; James Primrose, of Annapolis; E. L. Fuller, of Amherst; Charles Wilson Muir, of Shelburne; S. W. Eaton, of Canning; F. H. Parker, of Harborville; Henry Fraser, of Pictou; George A. Polly, of Lunenburg; Frederick Primrose, of Bridgetown; Horace E. Eaton, of Parrsboro'; M. P. Harrington, of Liverpool.

The Board hold office for two years. Four form a quorum. The following Matriculation Examination is required:

Standard of Matriculation or Preliminary Examination established under this Chapter:

Compulsory.—English language, including grammar, composition and writing, and decimal fractions and the extraction of the square root. Algebra, to the end of simple equations. Geometry, first three books of Euclid. Latin, one book—translation and grammar. Elementary mechanics of solids and fluids.

And one of the following *Optional* subjects: History of England, with questions in modern geography, French translation, one Greek book, History of Nova Scotia, History of the Dominion of Canada.

REGISTRATION IS COMPULSORY.

"No person shall be entitled to have his name entered in the Register of the Provincial Dental Board or to receive a license to practise from such Board unless he shall satisfy the Board that he has passed the Matriculation or Preliminary Examination; and after passing such examination he has followed his studies during a period of not less than three years (twelve months of which may be under the direction of one or more regularly qualified dental practitioners) that during such three years he has attended at some University, College or Incorporated School of Dentistry in good standing, courses of lectures, amounting together to not less than twelve months on General and Practical Anatomy, Physiology, Chemistry, Operative Dentistry, Mechanical Dentistry, and Dental Therapeutics; and that he has attended the clinics, both in Operative and Mechanical Dentistry, in some University or Dental College, recognized by the Board, for a period of not less than two years; that he has, after examination in the subjects of the course, obtained a degree or diploma from such University, College or

Incorporated School of Dentistry, or for want of such degree or diploma that he has satisfactorily passed an examination in the various branches hereinbefore specified, before examiners to be appointed by the Provincial Dental Board ; that he is not less than twenty-one years of age, and that he has paid to the Registrar of the Board a fee of Twenty (\$20) Dollars ; provided that the Provincial Dental Board shall have power, with the approval of the Dental Association, to make such alterations in the foregoing curriculum as may from time to time be required, subject to the approval of the Governor in Council."

Persons in actual practice in Nova Scotia previous to the passing of the Act are exempt from the last preceding section, but they must register and obtain a license to practice. Any one producing evidence that he has passed the Matriculation, that before graduating or taking a diploma he has studied for three years, or pursued what the Board consider an *equivalent* course of study, and has passed a final examination in the subjects of such course, etc., shall be entitled to be registered.

"The Provincial Dental Board shall hold a meeting every year, at which annual meeting they shall have power to appoint examiners, fix time of examinations, and transact all business arising out of this chapter."

Correspondence.

Editor DOMINION DENTAL JOURNAL :

The Dental Bill, incorporating the Dental Society of the Province of Nova Scotia, with power to form a Board of Examiners, consisting of seven properly qualified practising dentists of not less than three years' standing, became law by Act of last Assembly, and was placed on the Statutes of the Province May 19, 1891, the Government assuming the right to name four of the seven who are to constitute the Board of Examiners. After ten days' notice a meeting of those whose names were embodied in the Act was called in the city of Halifax, and held on the second day of June. Quite a large number were present. The business resulted in appointing as President of the Association J. J. McKenna, D.D.S., of Kentville ; A. C. Cogswell, D.D.S., President of Board ; T. G. Merrill, D.D.S., and C. A. Fisk, D.D.S., as members of the Board of Examiners ; H. Woodbury, D.D.S., as Secretary ; and Treasurer, W. C. Delaney, of Halifax. The four gentlemen to be named on the Board of Examiners by the Government will be selected from the profession, and their names handed in to

the Society in a few days, and will have much pleasure in forwarding their names and places of residence.

The next meeting of the Society will be held on the third Wednesday in September, at which we are in hopes to have a good attendance, and as we have some fifty practising the profession of dentistry in this Province, we feel confident of making our meeting not only pleasant and interesting, but hope to profit by mutual intercourse and clinics, as well as from papers on subjects to be read at the Society's meeting, as proposed.

The Dental Society voted to make the DOMINION DENTAL JOURNAL our medium of communication, and desired all the members to subscribe for the Journal.

A. C. COGSWELL.

The New Brunswick Act,

To the Editor of DOMINION DENTAL JOURNAL :

DEAR SIR,—There has just been a copy of your article on the New Brunswick Dental Act handed me, copied from the DOMINION DENTAL JOURNAL, and, I must confess, I was very much surprised at its aggressive tone and also its entire lack of argument.

It appears to me, Mr. Editor, that you have not given the Act, *as it is*, careful reading, and also, when the entire body of dentists of New Brunswick are satisfied with the present Act, rather unnecessary and intrusive for one who is in Quebec, and who confesses that the only dental school in Canada is solely for local purposes, to endeavor, by articles in his journal and writing to the legislative member who presented the Bill, to remodel it to suit his ideas of what is best for New Brunswick dentists and people; for while New Brunswickers are always willing to emulate the better Acts and doings of other provinces, they must really be excused from copying everything in its entirety that the Province of Quebec or Ontario may do. We believe we have an Act which suits both the people and the dentists of New Brunswick, for I think the man would be a *rara avis* who, wishing his son to have a profession the perfect knowledge of which could not be obtained in New Brunswick, would not send his son or daughter outside his own home, or county, or province, or even country, to obtain it. If we followed in the steps of the medical profession, we would have a Board of Examiners who would compel all those who have a degree of M.D. (McGill excepted) to pass an examination before they can legally practise; but we consider it unnecessary work, at present, when the person has spent *three terms* of study at college, and, in most cases, practise in a dental office in the intervals, to compel him to have the additional expense of paying examination fees and passing another

examination before a local board of examiners. If men in New Brunswick desire to become dentists, having no Dental Colleges in our own Province, I think them few indeed, so extremely patriotic but that they are willing to give their time and money to obtain it in other provinces or countries ; and I contend, that a student cannot get as thorough knowledge of dentistry in its theory and practice in a dental office, when the instructor has to give his attention to patients and student, as he can in a college equipped for the sole purpose of imparting knowledge to the student, and where he has the advantage of both lectures and clinics. There are few people who would allow a student to do the work they intended a competent dentist to do, whereas, in a college the student has every facility for operating, persons going there with the intention of allowing the student, in most cases, to do the operating. Everybody knows that, as it is to-day, the degree of Doctor of Dental Surgery is a criterion of not a classical, but a professional, education, for the matriculation and *three years' course* now required by the colleges everywhere, and those colleges coming under the supervision of the National Associations of Dental Faculties, a student can surely get more knowledge of theory and practice in the time required under the professor's tuition than in four years required by a licentiate, who spends the greater portion of his time in the laboratory of a dental office, scraping plates, mixing plaster, and other light work of the laboratory. In Ontario and Quebec a student in a dental office has to attend anatomy, physiology, and chemistry in a medical university, and any "student wishing to avail himself of the facilities for operative work, is allowed to attend the recognized United States Colleges one term of his four years." Now, Mr. Editor, if one term is good, three is better ; and I hold, a student attending three terms at an efficient dental college, graduating and taking his degree and diploma from that institution, will be more proficient and stand higher in his profession, than he would by picking it up part in a dental office and part at a medical university, and finally taking one term at a dental college in the United States, and in the end have no degree of any consequence conferred on him. As regards the cost, I don't suppose a dentist is going to give his instructions for nothing, and with this studying at a medical college and the allowing to go to the "United States for a term," will, in the end, I think, cost as much as though he had spent three years in an efficient dental college, particularly if the student is not a resident of the place where his instructor lives.

Every one knows that these sons or daughters have to be sent away from home to receive their education, either classical or professional, unless they happen to live in the city or town where the schools are located, and it is with no compunction after they have learned all they can on any one branch at home and wish to be more proficient in it, that they send them abroad to spend as much

time as is necessary, or they can afford, to become proficient doctors, lawyers, ministers, artists, etc. ; and as for the moral side of the question, I have yet to learn that dental colleges are more immoral than any other college of our land, and I think "a youth of seventeen" can be as safely left there as in any other educational institution. "A youth who assists in a dental office, and who is not allowed to practise outside his employer's office," to which you do not object, instead of losing his time spent in the office, can utilize the instructions received there at college. We are told by scientists, that there is not an atom of anything lost in nature, and so we believe in knowledge. The student is better able to enter into his work, and will learn more quickly to accomplish perfect results for his previous knowledge, and the remuneration which a youth generally gets by assisting in an office, may help him to get a college training, which should be the ambition of every young man wishing to take a profession. Those States which formerly required a subsequent examination, before being allowed to practise therein, since the forming of the National Association of Dental Faculties, are doing away with the Board of Examiners ; besides, that is really no argument in favor of licentiate rather than college training, as it only shows they are more particular, as the Medical Act of New Brunswick.

Now, Mr. Editor, it will be seen by carefully and impartially reading our Act, that we have not legislated for the United States, as you tried to make it appear, but for the benefit of the people of New Brunswick, and to raise the standard of the profession ; and we hope, and expect in time, to have an efficient Dental College in Lower Canada, where students can get the desired training ; but until then we, to get a proper dental education, will have to go from home to obtain it. We are sorry, Mr. Editor, that you cannot approve of our Act ; but you know that we cannot all see alike ; and while we respect your views, we think you should do the same by us, as we live in the age of liberty and thought, and I have no doubt when our legislators, in their wisdom, see it is detrimental to the interests of our Province, they will remodel it without interference from outside.

Trusting you will find room in your valuable journal for these few remarks,

I remain, yours truly,

C. A. MURRAY, D.D.S.

MONCTON, N.B., *March 20, 1891.*

The New Brunswick Act.

SIR,—A good deal of indignation has been naturally aroused by the action of the New Brunswick Dentists, in forcing New Bruns-

wickers out of the Province, if they desire to study dentistry to practise in it ; and as it ought to be in the interest of the Dominion for Provinces to harmonize the various Acts, Medical and Dental, as much as possible, with a view to united action and Dominion registration at some future day, the legislation in New Brunswick is most unwise, and to some extent intensely selfish. The gentlemen who projected the Act, would resent the imputation that they are personally less competent than the founders of dental legislation in Ontario, Quebec, Manitoba, the North-West Territories, British Columbia, and now of Nova Scotia, to constitute a Board of Examiners, and provide a course of study. If they ask from the Legislature special privileges and exemptions, they should not attempt to force residents of the Province to a foreign country, or even to another Province, to qualify them to practise in their own. As a New Brunswick M.D., I feel it my duty to enter a protest, and fully to second your sentiments in the March number. I have nothing whatever to say against foreign colleges, but as a New Brunswicker, I feel humiliated, that our Province has not men sufficiently alive to the provincial importance of developing some system of local dental education for those who, unlike the privileged few, are not able to go to the great expense of a course in Philadelphia. One of my friends here has put into my hands the list of Canadian students attending American dental colleges, and I am sure I heartily approve of their action. Naturally, richly endowed institutions, like the dental colleges in Philadelphia, New York, Chicago and elsewhere, afford certain facilities, which a country of smaller population, like Canada, cannot yet possess. But that is not the question. Let our young men use these institutions *if they choose*, as aids or as supplements, but let them rely upon some local education.

Look at the poorest of our Provinces—Quebec. Supposing the Quebecers had said : “We cannot do as well in medical teaching as New York,” where would McGill University have been? But they bravely resolved to try, and see where McGill is now.

Had Nova Scotia said the same, where would the Dalhousie University have been. Even Manitoba has had the pluck to organize the Manitoba Medical College. It seems to me there is a nigger on the fence in New Brunswick. Do the projectors of the New Brunswick Dental Act want to monopolize the Province? Are they unfit to educate? If so, are they fit to operate?

Again, I say, I have the utmost respect for the dental colleges of our cousins, but I have self-respect, too ; and I don't want to see New Brunswick play second fiddle, even to Ontario, and certainly not to Quebec.

Yours,

M.D.

Personal.

Some one desired to know who was the oldest practising dentist in the Dominion in the last issue of our JOURNAL. I may say, for Nova Scotia I think I may claim the precedent, so far as I am aware of present names. I practised in Boston, Portland and Wakefield, Mass., six years before coming to Halifax, and since 1858 in this city, making thirty-three years in Halifax and six years in the United States of America; total, thirty-nine years' practice, and I am now in my fifty-seventh year. No doubt, others may be older and longer in the profession in Ontario—possibly in New Brunswick—perhaps we may hear from some others later on. Old Father Time, though, is working his changes. No less than five who have been associated with me since I commenced in this city have gone to their long home. Dr. Van Buskirk died of heart disease, Dr. MacKay became insane, Dr. E. R. Cogswell was shot accidentally in Mexico, Dr. Mack was killed in South America—the two latter were students and one a partner of mine—and last, Dr. O. P. MacAllaster died in Lynn, Mass.

A. C. COGSWELL.

Editorial.

The New Brunswick Act Again.

If anything official was needed to add force to our condemnation of the New Brunswick Act, it would be the remarkable letter of Dr. Murray, on another page. Over a year and a half ago our correspondent, personally, by letter, solicited the advice and opinion of the Editor on the subject of dental legislation for New Brunswick. When this opinion, based upon a daily intimacy with dental legislation in Ontario and Quebec for over twenty years, did not coincide with the plans of the promoters, it is considered "aggressive and intrusive," and this by the parties who did not think it "aggressive and intrusive" when they tried to legislate men out of business as well as out of New Brunswick who did not come up to their standard of professional qualification. The assumption held that merely because a man held a D.D.S. he was a better dentist than one who did not, was neither more nor less than arrant nonsense, based, no doubt, upon ignorance of the fact, that scores of quacks and impostors to-day possess that degree, by virtue of a few months spent in one of the colleges which the New

Brunswick Act recognizes. Our correspondent opens himself unwittingly to so much criticism that we shall only briefly refer to a few points.

Why cannot a knowledge of dentistry be given by dentists in New Brunswick as well as by those in Quebec, Nova Scotia, Manitoba and British Columbia? Most of our most successful men never saw the inside of a college. Why should a Board of Examiners not compel all those who have a degree of D.D.S. to prove by examination that they are qualified men, when it is so well known that the D.D.S. is not as yet a proof of qualification? Our correspondent trifles with fact when he writes of persons who have "spent three years of study at college," etc. He knows very well that the colleges have only exacted two years, that medical graduates have been exempt from one; and that the "three years" course does not begin until next October. Why should not New Brunswick copy anything good in the legislation of Quebec or Ontario? It was not humiliating for Nova Scotia to do so. It is a fact that New Brunswick, perhaps more than any other Province in the Dominion, has a dearth of dentists. We are personally aware of patients in places like Edmundston, and other important railway centres, obliged to travel over two hundred miles to St. John's, or nearly as far to Quebec city, to get ordinary operations performed; and we have repeatedly been consulted by letter by parties in that Province wishing to study dentistry, and who complained that even the office facilities which existed so freely in Quebec seemed to be closed in New Brunswick.

Any one who is at all familiar with the best thoughts of the best men in the profession in the United States, must know that they have deplored most seriously the low standard of preparatory, as well as of professional, education. So apparent is this, that hardly a man of mark, and certainly not a journal, has failed to draw attention to the fact for successive years, and within the last twelve months some of the most remarkable articles read before our societies have dealt with the subject in a very trenchant manner.

The advantages of previous office teaching, as well as the importance of increasing the qualifications, have been dawning upon our cousins over the border for some years; while in England, France, Germany and Canada the apprenticeship system has never been ignored. Our correspondent writes, with much positiveness, in

defence of a system abroad which rarely finds a defender in its own home, and we must do him the justice of believing that his enthusiasm for the system which gave him a degree, has blinded him to the possibilities of its improvement. Dr. Chas. B. Atkinson, in a valuable paper before the New York Odontological Society, lays it down as a fundamental principle of dental teaching that "previous private pupilage is of great importance to a proper candidate for dental education." In the discussion which followed, Dr. Kingsley said, "I feel that private pupilage is one of the best ways of learning dentistry. If you add to that a college course, that is so much clear gain; *but no amount of college education in the world can take the place of the practical training of the pupil in a dental office, if thorough and under a competent instructor.*" We could fill volumes with just such extracts from the writings and speeches of the recognized *teachers* of dentistry in the United States, and it is rather a presumption to say that these men do not speak from experience. Our correspondent could not have a weaker link in his exceedingly weak chain of defence than to slight office pupilage.

It may, perhaps, surprise our New Brunswick friends—for, in spite of difference of opinion, we hope we may so remain—to know that we submitted the New Brunswick Act to several of the best legal authorities in the Dominion before we expressed final opinion upon it, and that the section of the statute to which we objected was considered by them so unwise, that we were advised to make representations to the Legislature for its remodelling. Whether or not this is within the jurisdiction of the only dental journal in the Dominion remains to be seen, but we must reiterate the opinion that the promoters of the Act in that clause very sensibly humiliated a Canadian Province, and did no honor to their own claims to disinterestedness.

Contributions.

Many good fellows frequently tell us or write us what we ought to do to improve this JOURNAL, but it is curious how few of them ever think of contributing some specimen ideas. It would be very monotonous if the editor did all the writing. The educational status of the Canadian profession is infinitely ahead of what it was

even twenty years ago, and we should have a host of ready thinkers and writers, especially among the younger generation. The JOURNAL will welcome every effort to fill its pages with practical ideas. We commend as a capital illustration, the pithy and practical contributions of Dr. Beacock, of Brockville. There is not a dentist in the Dominion that could not jot down some of his experiences in this way, and so help along the cause of dental journalism in Canada. It will be good practice, too, for the editors of the future.

Quack !

It is one of the curious phases of professional morality—or, rather, immorality—that while there are men who zealously and unselfishly labor for the professional good, and a majority who desire progress, but who do not care to put their shoulders to the wheel, there are also a small minority of men who deliberately put themselves in the ranks of the quack, simply because they believe that honesty does not pay. For this reason they cast aside all the decencies and ethics of professional life, exclude themselves from membership in respectable societies, and fasten the stigma of “Quack” to their reputation, trusting to the gullibility of the public for what they call “success.” Our Canadian cities have never yet given long life to this class of fraudulent practitioners, but on matters of medical and dental treatment the public are easily deceived.

“A lie,” said Thackeray, “once set agoing, having the breath of life breathed into it by the father of lying, and ordered to run its diabolical little course, lives with a prodigious vitality. You may say, ‘Magna est veritas, et prævalebit.’ Pshaw ! Great lives are as great as great truths, and prevail constantly, and day after day.”

When a man thus deliberately blackens his own professional character and ambition, he need not wonder that respectable practitioners take him at his own value. There has never yet been a single instance on record, of a truly worthy professional man using false and boasting methods of advertising. A man who resorts to this degrading system has all the instincts of a quack.

Selections.

Porcelain Dental Art.

By W. A. CAPON, D.D.S., Philadelphia, Pa.

The advantage of porcelain as a means of making artistic dental operations has long been known, but the difficulties attending its successful manipulation have been so various and discouraging that not many dentists have pursued such seemingly profitless and necessarily expensive experimenting. A few, however, have persevered, and their efforts have been rewarded with success. No improvement in dentistry during the past decade will compare with this. By its use painful and difficult operations are reduced to the minimum, and are artistic in a wonderful degree. In illustration of this the following case of extensive erosion is presented.

Miss C., of Philadelphia, aged twenty-two, nervo-lymphatico-sanguine temperament, of good health, had suffered from gradual loss of tooth-structure, which commenced about five years ago, resulting in the condition shown in Fig. 1.

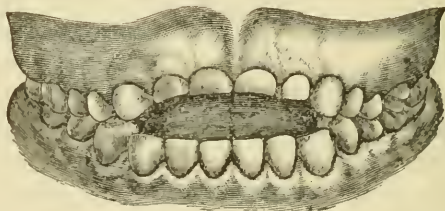


Figure 1.

The deformity was very unfortunate for appearance, and the speech was very much affected. Biting and masticating were difficult, and often painful from the close proximity of the pulp to the surface. To overcome this one of the many devices as suggested by Dr. C. H. Land, called the "jacket" crown, was employed, and made as follows: After reducing the teeth with engine corundum wheel as much as possible without producing pain, a tube of platinum, gauge thirty-two, was closely fitted to the necks of the teeth, then soldered as in ordinary band-work. The palatine portion was then ground flat or slightly concave, and another piece of platinum soldered to it to give a natural palatine contour. The labial surface was then ground in a similar manner, which reduced the tube to a wedge shape. After fitting and burnishing closely to the teeth, a thin porcelain veneer was placed in position by adding porcelain body and baking in a small gas furnace. The crown was

once more put in place, and occlusion noted, more body being added where indicated. After baking from five to seven minutes, it was ready for attachment by cement, as in other crown-work. When finished it presented the appearance shown in Fig. 2.

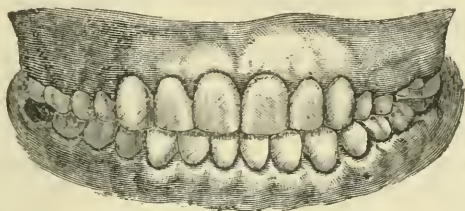


Figure 2.

Thus six superior oral teeth with live pulps were incased in a durable and artistic manner, the operation causing no pain nor inconvenience. For anchorage we have the natural teeth themselves, with the great advantage of easy entrance should pulp-trouble occur. The palatine surface being platinum, offers a means of easy and quick access. This jacket crown has been used in every portion of the mouth successfully in every respect, but is especially indicated for "peg" or "rice" teeth, pitted or "measley" teeth, or any other disfiguring deformity, especially when attended by sensitiveness; also in cases of darkened and devitalized teeth, or where unnatural spaces exist. Such defects are remedied in a manner so satisfactory and so speedily, that all must admit that an operation of this character overcomes in a practical manner what were heretofore insurmountable obstacles in operative dentistry.—*Cosmos*.

The New Brunswick Act.

The sooner this Act is amended the better. Several letters on the subject have come to us, commenting severely upon the utter exclusion of young men from the possibility of education in their own Province, and the unfairness of forcing them, even indirectly, to go to the United States, and obtain a foreign degree, before being permitted to practise in a Canadian Province. The following extract from the *Montreal Gazette*, is one of many such press comments, and if our New Brunswick friends are wise, they will trim their sails before the storm of public indignation is upon them. New Brunswick is better able than Manitoba to be independent of any Province in the matter of dental education. If the promoters of the Act openly admit their inability to do as much as Quebec has done for over twenty years, they do not pay much compliment

to the teaching of the Colleges at which they graduated. If they are only unwilling, they should step aside and let those who are willing do it.

"The action of Legislatures in giving the majority in certain callings control over all who follow them for a living has had a curious effect in New Brunswick, where, in order to obtain leave to practise as a dentist, a student is compelled to go out of the country to get his education and his diploma. The DOMINION DENTAL JOURNAL comments somewhat severely on the profession in New Brunswick, who, having obtained the advantages they calculated on from legal incorporation, refuse to assume the duties arising out of the status the law gives them. The Association has, it seems, declined to undertake the task of examining students, and passed a by-law, compelling any one who wishes to practise dentistry in the Province, to satisfy the Registrar that he has fulfilled all the requirements for graduation in any one of the colleges or dental schools in the United States, or in some college or dental school recognized by the council. This practically means that a New Brunswick dentist must go abroad to qualify for his business. It means, also, that this qualification may be in some cases a very poor one—some of the United States institutions granting degrees apparently on the principle that any one who can pay for a sheep-skin is good enough to pull teeth. The profession in New Brunswick evidently needs the stirring up it gets from the JOURNAL. Its neglect of its duty also suggests that legislatures should be more than ordinarily careful in granting charters to trade guilds."

Scientific vs. Practical Instruction.

Liebig, writing of his famous school at Giessen, said: "The technical part of an industrial pursuit can be *learned*; principles alone can be *taught*. To learn the trade of husbandry the agriculturist must serve an apprenticeship to it; to inform his mind in the principles of the science, he must frequent a school specially devoted to this object. It is impossible to combine the two; the only practicable way is to take them up successively. I formerly conducted at Giessen a school for practical chemistry, analysis, and other branches connected therewith, and thirty years' experience has taught me that nothing is to be gained by the combination of theoretical with practical instruction. It is only after having gone through a complete course of theoretical instruction in the lecture-hall that the student can, with advantage, enter upon the practical part of chemistry. He must bring with him into the laboratory a

thorough knowledge of the principles of the science, or he cannot possibly understand the practical operations. If he is ignorant of these principles, he has no business in the laboratory. In all industrial pursuits connected with the natural sciences, in fact, in all pursuits not simply dependent on manual dexterity, the development of the intellectual faculties, by what may be termed school learning, constitutes the basis and chief condition of progress and of every improvement.

"A young man, with a mind well-stored with solid scientific acquirements, will, without difficulty or effort, master the technical part of an industrial pursuit; whereas, in general, an individual who is thoroughly master of the technical part may be altogether incapable of seizing upon any new fact that has not previously presented itself to him, or of comprehending a scientific principle and its application."

Obituary.

Dr. White, Editor of the "*Cosmos*."

On Wednesday morning, the 27th of May last, we were on the steps of the S. S. White Dental Company, in Philadelphia, to pay a journalistic visit to Dr. James W. White, when a messenger met us with the news that he had just dropped dead at his residence, from heart failure. The shock to the community in which he had so philanthropically served his generation was apparent to a stranger, and the press of the city, without respect to politics, united in appreciative testimony to his personal and public character. As President of the Company, and Editor of the *Cosmos*, he was best known to the profession. Dr. White received the degree of M.D. at the University of Pennsylvania, and the honorary degree of D.D.S. was conferred on him by the Pennsylvania College of Dental Surgery, but he devoted most of his life to a business career, and a great share of his leisure to works of philanthropy.

The following resolution by Dr. Allport, in regard to the death of Dr. White, was passed at a meeting of the Chicago Dental Society, held Tuesday evening, June 2nd, 1891:

Whereas, it hath pleased the Creator and final disposer of all things to remove from this world Dr. James W. White, of Philadelphia; and

Whereas, it is fitting that this Society should make some record of its appreciation of his virtues and of his useful life; therefore,

Resolved, That in the death of Dr. White, dental journalism has lost its ablest editor, the business world a member of sterling integrity, the unfortunate and needy a practical philanthropist, and the church an exemplar of the nobility of a liberal Christian religion.

Resolved, That in their affliction we extend to his bereaved family our sincere sympathy, and with reverent humility we commend them to Him who has promised to be "the friend of the widow and the fatherless," and "a real present help in the time of trouble."

Resolved, That a copy of these resolutions be transmitted to the family of the deceased, and sent to the *Dental Cosmos*, *The Dental Review*, and other dental journals, for publication.

Editor DOMINION DENTAL JOURNAL :

At the meeting of the Chicago Dental Society, Tuesday evening, May 5th, 1891, the following resolutions on the death of Dr. Wm. H. Atkinson, of New York, were adopted :

Whereas, The Chicago Dental Society, having learned of the death of Dr. Wm. H. Atkinson, of New York, one of the most eminent, learned, and best known members of the dental profession, therefore, be it

Resolved,—That, in the death of Dr. Atkinson, the members of this Society feel a sense of personal bereavement in the loss of a much loved and conspicuously useful member of the profession, and while we bow in humble submission to the Divine will, we desire to express our sorrow in his final exit to the unknown land beyond this world of ours. Be it further

Resolved,—That the Secretary transmit to the bereaved family of Dr. Atkinson a copy of these resolutions, and that a copy be furnished the dental journals for publication.

J. N. CROUSE,
A. W. HARLAN, } *Committee.*
W. W. ALLPORT, }

Abstracts from the Journals.

Iodine and Glycerine.

Tincture of iodine, mixed with glycerine, is claimed by Dr. Hammond to be more effective as a local application than the plain tincture. This is due to the retardation of the dissipation of the iodine, or more likely to the skin remaining soft, and, therefore, in a better condition for absorbing the drug.

Pyorrhea Alveolaris and Catarrh.

Dr. E. T. Darby says that there are some constitutions in which pyorrhea is incurable, that no one need expect to cure every case, and that the dentist who succeeds in saving fifty per cent. of the affected teeth is unusually successful. He says, further, that he never knew a bad case which was not accompanied by catarrh.

Sensitive Dentine.

Dr. Williams obtunds sensitive dentine by allowing a simple solution of chloride of lime to remain a short time in the cavity. For the general obtunding of sensitive dentine he has the patient rinse the mouth with dilute lime water, not strong enough to be caustic. He claims to have used these before ether was thought of for that purpose, and says he has obtained good results from them.

Dark Joints.

Dr. W. W. France says, in the *Items of Interest*, that he packs the joints of his vulcanite plates with about a quarter of a sheet of gold foil, and that he has never had a dark joint since he commenced its use. Where the space is small, one thickness of the gold pressed in with the edge of a penknife blade is quite sufficient. Tin foil will do equally well.

Phosphate Fillings.

While valuing phosphate fillings, especially in the preparatory treatment of children's teeth, and as a non-conducting flooring under metallic fillings, I never insert them in deep cavities of living teeth without applying on the region overlying the pulp a protective film of mastic or carbolized resin. Such a proceeding reduces to a minimum the pain often produced by the introduction of the filling, and, I believe, prevents the ill-effects which otherwise may arise from the near contact with the pulp of the cement.
—Dr. L. Matheson, in *The Items*.

What He Thought of It.

One of our practical country practitioners from one of the upper counties of this State was recently on a visit to New York, and, among the other wonders of Gotham, took in one of the gynecological clinics. It was one of the professor's field days, and at the conclusion of a brilliant clinic, he asked Dr. F—— "What he thought of medical matters in the metropolis?" Dr. F—— replied:

"Well, I would rather be a moonshiner down in Tennessee than a uterus up here in the hands of you New York doctors."—*Southern Practitioner*.

The Dentist Wins.

It has been held by Judge Knapp, of the Hudson County Court (N.J.), that a dentist may pull the wrong tooth without making himself liable to damages. According to the *New York Times*, that was the decision arrived at in the case of Joseph McManus, of Jersey City, against dentist E. F. Hanks. It appears that one of Mr. Hanks' assistants extracted a wrong molar for the plaintiff, who instituted proceedings to recover \$1,000 damages. It was shown by the evidence that the tooth drawn was defective, and the Judge instructed the jurors that unless it could be shown that the dentist did not use ordinary skill and care in performing the operation, the plaintiff had no right of action against him, even if the wrong tooth had been drawn. The verdict was in the dentist's favor.

A Safe Local Anæsthetic.

If we are to believe the statement of Dr. C. T. Meaker, of Carbondale, Pa., in the *Items of Interest*, a few drops of a five per cent. solution of carbolic acid in water, injected under the gum on each side of a tooth to be extracted, makes an excellent and safe local anæsthetic. Its effect, he claims, is almost instantaneous, and is particularly marked when there is swelling and inflammation about the tooth. As only one drop of carbolic acid is contained in twenty drops of the solution, the quantity used is too small to cause any constitutional disturbance.

Electricity in Extraction.

The last number of the *Journal of the British Dental Association* contains a letter written by Dr. H. F. Briggs, giving his experience in having a tooth extracted with electricity as an anæsthetic. He says that the sensation during the operation was like being "the central figure" at a miniature execution by electricity, and that he not only felt the pain of the tooth being taken out, but pain about the head, face and arms as well. To this was added the helpless feeling of not being able to let go the handles while the current was on. He informed the dentist that it hurt a good deal; but the dentist replied: "With due deference to you, I must say it didn't." He says that he would much prefer having a tooth extracted without an anæsthetic of any kind than submit again to the electricity.

DOMINION DENTAL JOURNAL.

VOL. III.

TORONTO, SEPTEMBER, 1891.

No. 5.

Original Communications.

The Status of the Profession in Ontario.

By C. N. JOHNSON, L.D.S., D.D.S., Chicago, Ill.

It is sometimes very tempting to tell people what we think of them from our own individual standpoint, and if this communication should at times seem at all personal, it must be attributed entirely to a weakness on my part in yielding to this temptation. And yet this article is written, not so much from inclination as from the suggestions of several Ontario dentists, who wish their brothers tuned up by an outsider.

The truth is, that the rank and file of the profession in this Province are at least ten years behind the times, and in the present progressive era of dentistry ten years means something more than one hundred and twenty months.

There must be some reason for this. Probably there are more reasons than one, but it seems to me that the main cause of the backwardness of the profession, resolves itself down to the one evil of professional narrow-mindedness and bigotry. This is manifest, of course, more particularly with the men who years ago settled into a groove and have remained there ever since—men who never had the advantage of collegiate training, and who do not believe in colleges or dental societies. It is this class of men who, the

world over, constitute a drag on the profession ; but it would seem that Canada had more than her share of them. The vast majority of the profession in the Dominion have no membership in any dental society, nor do they seem to have any inclination to fraternize with their fellow practitioners. Much missionary work is needed here, but, of course, in many instances the case is hopeless. Time, in her beneficent designs, will do more than anything else to remedy the matter with some of these men, and, meanwhile, I do not feel like quarrelling too much with them. They are their own worst enemies.

But I have a word for another class of men who, I have every reason to believe, may be benefited by advice. These are mostly the young men who have graduated in recent years, and whose bent of mind is usually in favor of professional progress. They are well educated, to begin with, and education in an individual ordinarily stimulates a desire for research. Probably these men constitute the majority of the membership in the societies, and they are the main hope of the profession in Canada.

But from some serious defect many of them do not seem to realize what successful society work means. They do not yet know how to run dental societies. They allow matters of too trivial a nature to keep them away from the meetings. When a dentist becomes a member of a dental society, and signs the constitution and by-laws, he places himself under an obligation to forward the best interests of the society at all times, even at the expense of his own personal comfort and inclination. There are two objects in joining a society. One is to get benefit for oneself, the other to benefit others and elevate the profession. The latter of these is too often entirely ignored. Selfishness is as great an evil in society work as elsewhere, and while few members would bow their heads to a charge of being selfish, yet in point of fact, they are selfish when they allow their own individual convenience to interfere with their duties to the society.

I have watched somewhat closely the average attendance on dental meetings during my visits to Ontario, and seldom do I find anything like a representative membership present. I have attended two consecutive meetings of the principal city society of the Province. At one meeting there were eight or ten members present, at the other there were two members of the society, with two

visiting dentists besides myself, making a total of five. This in a city where there are over sixty dentists!

But the most suggestive feature of these meetings was the fact that on neither occasion was there a single officer present, with the exception of the president. When a man accepts office in a dental society, he should consider himself under obligation to the society to do his share of the work. It is a betrayal of the confidence the society has placed in him to have him neglect in so flagrant a manner the duties which belong to his office. Some of my recent experiences with officers of societies in the Province, have convinced me that much of the lukewarmness exhibited by the mass of the profession in society work, is due to the fact that the men who hold office fail to appreciate the responsibility that devolves upon them. To say it in brief, they do not attend to business. They allow matters to drift along, and expect the society to run itself. It has been a matter of some wonderment to me whether or not these men conduct their own private affairs on the same principle.

If I might be allowed a word of suggestion to officers of societies, it would be something in this line: Study at all times the best interests of the society you represent. Think of it, not only when in attendance on the meetings, but between the meetings. While working at your chair, or sitting in your study, try to devise means of increasing the interest. Enthuse your fellow-practitioners on the subject of societies at every opportunity. If asked for information, by letter or otherwise, on any matter pertaining to the society, be sure to answer promptly and fully, and do not shirk correspondence because it is sometimes irksome, when the society's interests are in any way involved. Be prompt and constant in attendance at meetings, and stir the other members up to a like necessity. In short, do not be afraid of work; for no dental society was ever successfully conducted without work.

But truth to tell, it was another class of men altogether whose attitude induced the writing of this article. There are men in the Province who have been in the dentistry long enough to have a well-established practice, men who have prospered in their profession and who are in a position to do an immense amount of good; but who, through some little petty jealousy—probably of many years' standing—hold aloof from professional fellowship, and ignore the duties that every professional man owes to his calling.

Sometimes they hang around the outskirts of a society, and absorb all the benefit they can without the slightest effort to yield anything in return. I have all charity for a man who lacks in ability, and who avoids a prominent place in society work from conviction of his incapacity, but these men are not of that stamp. They assume superiority over the common herd, and consider it not worth their while to fraternize with their fellows. They are not only derelict in their duty to the profession, but they form a dangerous example for young men to point to and imitate.

If dentistry in Canada is ever to advance to a position equal to that of the profession in the United States, there must be a unity of endeavor all along the line, and the present petty spites and jealousies must be suppressed. Canadian dentists have the ability to advance, but they lack the liberality and true professional spirit of progressive men.

It may not do any good to tell them so, but somehow there is a certain form of satisfaction in it, and I trust the article will not prove altogether faultless.

Dental Caries.*

By D. V. BEACOCK, L.D.S., Brockville, Ont.

There are three divisions of micro-organisms in the production of dental caries. The first transforms starch and unfermentable sugar into fermentable sugar; the second changes this sugar into lactic acid; the third produces a kind of digestive fermentation. Now, if the normal secretions of the mouth are not able to counteract the effect of these acid producers, in some part of the oral cavity where food or other matter may find a lodgment, then decalcification, or breaking down of the enamel will begin; and when once the way is opened to the dentine beneath, and the micro-organisms have gained an entrance into the tubuli, the rapid breaking down of the lime salts of the tooth goes on till the tooth is beyond redemption, if the ravages are not arrested by the hand of the dentist. Dr. Ormiston says, that "bacteria do not reach the tubuli until decalcification has occurred in the enamel. Lactic acid fermentation very soon takes place in saccharine or

(* Read before the Eastern Ontario Dental Society, Brockville, July 2nd, 1891.)

starchy food that may have lodged in the teeth. The way once being opened, the coccus(a) of Miller enters the dental tubuli and completes the decay." Where teeth are exposed to the motion of the lips and tongue, causing constant friction, as in mastication, etc., these organisms are deprived of the opportunity to increase or grow. Consequently, we rarely or ever see caries at these exposed points. But, on the contrary, we do often find organisms growing and forming small colonies in out-of-the-way places where the brush cannot dislodge them. These secluded spots are mostly between the teeth, fissures, pits or grooves, or any irregularities, margins of badly-finished fillings, etc., furnish them with a secure lodgment. All these points give the opportunity for fungi. Sugar in the mouth provides the bacteria with food, and every crevice or flaw in a tooth, or any part hard to reach, or difficult to keep clean, becomes a focus of destructive activity for these acid producers. It has been shown by direct experiment that they will produce acid abundantly in a few hours after implantation. If in any protected place this acid is produced in immediate contact with teeth, and this is allowed to proceed without interruption, the effect will be to decompose the enamel, and finally to penetrate it, then the fungus finds a secure lodgment and can continue its development without danger of frequent disturbance. These fungus growths have no power of themselves to attack enamel or growing into anything, except it be a something that affords openings or spaces that are filled with soft matter, that its rootlets may gain a foothold.

The rootlets of plants cannot get a firm hold on the bare, smooth rock, neither can the fungus of caries grow on the smooth, glassy surface on the enamel of a tooth. But let a seed once find a crevice or opening where even the smallest quantity of earth and moisture can collect, it will soon germinate and throw out rootlets, that will give forth a solvent that will in time disintegrate the stone and cause the hardest rock to give it nourishment. Every one has seen gravestones that were covered with moss, especially in damp situations, that have lost their beautiful polish, the surface crumbling away, leaving it rough and porous. There is little doubt that the fungus of caries attacks teeth in a similar way. The three principal factors in the production of dental caries being heat, moisture, and microbes ; these conditions the mouth supplies to perfection.

It is not the organism that first makes the attack on the hard substance of the tooth, but the waste product of the organism, the lactic acid. This lactic acid is one of the waste products of bacterial life, and in the presence of any fermentable matter, forms one of the so-called ptomaines so destructive to teeth, in the form of caries. Dr. Allan says, that "were it not for the constant absorption of the lactic acid formed by bacteria into the lime salts of the teeth, forming lactate of lime, bacterial life in the cavity of a tooth would soon cease. They would be smothered in their own waste products, and die as naturally as we would die were we compelled to live in a close room in the presence of the waste products of our life, viz., the carbonic acid from our lungs, urine from the kidneys, and the fecal matter from the bowels." Exactly what the ptomaine is that produces this work of destruction, breaking down the animal basis substance, is not yet definable, but is supposed to be some waste product of bacterial life. Bacteria are the smallest of all known organisms, and, though bordering on the line separating animal from vegetable life, are now placed among the plants. It is said that fifty millions would not occupy a space larger than the dot of a pen; they were first discovered by a German, in the year 1675. Yet small and infinitesimal as these micro-organisms are, they are endowed with a peculiar quality called life; they can reproduce their kind, but are not capable of themselves of migrating from place to place only as they are conveyed by the air, in food, or from one mouth to another by instruments, etc.

A filthy mouth may well be said to be a bacterial hot-house, or forest of bacterial algæ. These fungi are composed principally of protoplasm; they are unicellular plants of the simplest form; they reproduce themselves by spores; from one to several may be produced from each cell. Their activity consists in converting sugar into lactic acid. The manner in which they effect an entrance into enamel is quite different to that of entering the dentine. These fungi, as previously remarked, cannot attack enamel; no signs of them are ever found on it until after it has become so far disorganized, that its prisms, crystals, or enamel rods, are so loosened that they begin to fall apart and separate, the lactic acid having destroyed the connecting tissue which unites these rods or crystals into a compact mass. The rods or crystals are not so

readily dissolved, and can often be seen and scraped from the surface of a tooth where the enamel has been attacked in this manner, in the form of fine powder. The enamel first becomes porous, then the rods, being deprived of their connecting substance, give way, leaving minute openings all through its substance ; through these openings the fungi of caries find a ready entrance to the dentine beneath. After the dentine is exposed, the enamel is undermined by the more rapid softening of the dentine which underlies it. The enamel in this condition is more or less disintegrated from its internal surface, and in this way it is, by the rapid disintegration of the dentine beneath, weakened and left unsupported, afterwards breaking away, leaving the cavity jagged and irregular. As soon as the dentinal tubes are invaded, they form a protection to these filaments of the fungus, which strike into them in the process of growth, and development occurs in that direction. Hence the rapid process of caries when it has once got a foothold in the dentine. This growth will continue in any and every direction, in which sufficient space is afforded for the development of filaments. In this way the dentinal tubes become filled with organisms, and the surrounding dentine is always decalcified in advance of the growth of the fungus by the lactic acid produced. This accounts for the circle or zone of semi-decalcified dentine to be found at the bottom of cavities. And this should forcibly remind us how important it is for dentists to carefully sterilize every cavity previous to inserting the filling.

For much of the material in this paper, I am largely indebted to the notes and observations hastily jotted down, while listening to the valuable and interesting papers read and illustrated by such eminent authorities as Drs. Black, Sudduth, Andrews, Allan, Ormiston, and others, at the different society meetings held in New York and Boston, which I have had the pleasure of attending from time to time.

Dental Dots.

By D. V. BEACOCK, L.D.S., Brockville Ont.

When a man makes a Quack of himself, he could not by words more plainly express the fact that he is not qualified to command

a first-class patronage. If he was, he would certainly prefer it, but knowing his inability, his only hope is to get up an extensive practice among the ignorant, poor and penurious.

In cavities that are very shallow, the pulp not being exposed, but very nearly so, it might be dangerous to drill for retention of filling or otherwise shape the cavity, a sticky oxyphosphate placed in the bottom of the cavity, and a pellet of gold placed thereon and pressed into place, may be used successfully, the rest of the filling can then be built out, condensed and finished.

Antipyrine in solution applied to the cavity after extracting a tooth, is good to arrest the hemorrhage, and much more pleasant than perchloride of iron. I sometimes use chloroform in the same way, which answers a double purpose.

Bristles, such as can be had at the shoemaker's, are very useful for cleaning hypodermic needles, better than wire in many instances, as they do not corrode.

Other things being equal, a dentist ought to improve as he grows older, within certain limits; but some can learn more in one year than another would in a whole lifetime. But all can improve themselves in this age of reading and progress.

Iodoform oil is made by shaking amorphous iodoform into ten parts of oil of lavender. Very pleasant and useful.

Much of the unsatisfactory working of copper amalgam arises from ignorance in not knowing how to work it properly. The material should not be heated and thrown into a cold mortar and instantly chilled, but kept warm while being vigorously rubbed and worked with a pestle in a good-sized mortar. Small-sized glass or porcelain ones are utterly useless for preparing copper amalgam with any satisfaction.

No dentist is worthy of reputable patronage who is not master of his profession, a gentleman in his manners, cleanly about his office, free from demoralizing habits, honest in his dealings with his patrons, and of good moral character; while he may more reasonably expect to be more and more successful the more nearly he meets the requirements of modern, refined and intellectual society.

Save up all your old waste bits of lead and other soft metal. Melt into a round or square block by pouring into a collar-box or other similar mould. Very useful for striking up gold caps, etc.

The dentist or surgeon who communicates a disease, syphilis perchance, to his patients, by the use of an impure instrument, has a burden of sin upon him greater than which there are but few. Besides, exquisite cleanliness and absolute freedom from germs, constitute half the battle in many operations in dentistry as well as in surgery. (Millar).

The ambition of every dentist should be to preserve the natural teeth, and we sometimes see dentists advertising "The preservation of the natural teeth a specialty." Their usual practice is more in harmony with the announcement, "The destruction of the natural teeth a specialty." What say the Vibrator advocates? See Canadian circular of testimonials. Some of these dentists, and they are spread all the way from Galt, in Ontario, to St. John, in New Brunswick, boast of having cleaned out over a dozen mouths in one week (this is preservation with a vengeance), and state that they hope to do a great deal more of this kind of wholesale slaughter by the aid of this electric machine. Some of these same machines, which cost seventy-five dollars, after a few weeks' use, are now offered for sale for a mere trifle. Only last week I had a call from a travelling dentist, offering for sale another wonderful local anæsthetic. Only twenty-five dollars for the secret (not worth twenty-five cents). He demonstrated for me, and left with the secret in his pocket, and I kept my money. Dentists who subscribe for, and read carefully, a good dental journal, ought not to be caught by these glib-tongued gentry.

Buy a sheet of carbon paper at any stationer's store, and cut it up into strips three or three and a half inches long by three-quarters wide ; this makes just as good articulating paper as any you can buy at the dental depots, and not one-twentieth the cost. There is a red kind which I use, and find very useful in certain cases. In fitting teeth and crowns, this carbon paper is almost indispensable for getting nice adjustment.

To clean wax get any old tin or skillet, put all your waste bits of wax, cards from artificial teeth into it, put a couple of inches of water in to keep the wax from burning, boil till all the wax is melted, then pour a pint of hot or boiling water into a washbowl or other suitable vessel, empty the contents of the skillet into this and let it stand till next morning. All the sediment will have gone to the bottom. Scrape this off, and should the wax not be clean

enough, repeat the same process, only this time add a teaspoonful of sulphuric acid to the melted wax before pouring ; this will make the wax clean and yellow, as when first made by the bees. It will not do to pour it into cold or even warm water, it must be either hot or boiling. If the above directions are carefully followed, there is no wax so dirty but what may be made just as good as ever. Wax can be toughened by adding either resin, Burgundy pitch, or, what is better, Venice turpentine.

Pyorrhœa Alveolaris.*

By G. ED. HYNDMAN, D.D.S., L.D.S., Sherbrooke, Que.

Pyorrhœa alveolaris, commonly known as "Riggs' disease," is a suppurative inflammation of the gums and peridental membrane, attended in acute cases with the destruction of the alveolar process, and resulting in the loosening and finally in the loss of the teeth.

The first indication to the patient of a pathological condition is an uneasy sensation in the gums and teeth, which, if not attended to with care, soon becomes painful, and the margin of the gums appear decidedly inflamed and bleed from slight causes.

As the disease progresses the inflammation extends deeper into the tissues, and they become congested with venous blood, swollen and have a tendency to separate from the necks of the teeth.

The separation of the gums from the cervical portions of the teeth gives rise to the formation of small sulci or pockets, thus permitting the retention of pus and micro-organisms, which become a further source of irritation to the peridental membrane and alveoli.

As the destruction of the alveolaris progresses the teeth become loose, and if the teeth affected by the disease be the incisors, they will usually protrude and separate from each other. There will be a viscid, fetid discharge, which will cause a disagreeable taste, and give the breath a very offensive odor. The gums will be of a purple or livid hue, with congested margins, which are sometimes denuded of epithelium, giving them a polished appearance. The roots usually become coated with calculus, which is of a

* Thesis presented at Examination for L.D.S.

greenish-brown color, and adheres to the teeth very firmly, and is sometimes in such thin scales as to render its removal very difficult. Of the two forms of calculus, salivary and serumal, the latter is more commonly associated with this suppurative inflammation than the former.

This pathological condition of the tissues about the teeth causes a serous exudation and diapedesis of the white blood corpuscles, which all combine to form this harder variety, known as serumal calculus.

Although pyorrhœa alveolaris depends almost entirely upon local causes, yet it is affected, no doubt, by any unfavorable diathesis which may aid local causes in producing more serious results than would be possible under more favorable systematic conditions. Low vitality, and all diseases which affect the circulation, may be looked upon as predisposing causes of pyorrhœa alveolaris.

Dr. Black contends that this disease is of a purely local origin, while Dr. Atkinson believed it to be from constitutional causes. There seems, however, to be good reasons for believing, with Prof. Truman, that the causes of this disease are both of a predisposing and of an exciting nature. In the treatment of this pathological condition, all teeth and roots of teeth which are so badly decayed, or so loose, as to be past restoring to usefulness, should be removed at once, for if allowed to remain they would be a constant source of irritation. Then the removal of all deposits from the teeth is of very great importance, and on the thoroughness with which this part of the operation is done will depend, to a great extent, the results of further treatment. The removal of the deposits from the roots requires skill and patience on the part of the operator, for lying close against the sides of the roots there will be found very thin scales which are so smooth that their outlines are with the greatest difficulty detected by the touch ; for this reason much care is required for their complete removal. This calculus is an irritant, no matter how small the amount, and any particles left will serve to continue the inflammation. The instruments for this operation should be narrow and slender, and formed with care and delicacy. The bulk of calculus may be removed by curved or hoe-shaped instruments, but for the removal of the last portions, or for serumal calculus, the instruments should be so formed as to

work with a pushing motion, that is, they should work from the hand in the removal of concretions.

In cases where the alveolar process is affected and absorption has left the edges rough and jagged, the edges which are rough and any particles of the process which are diseased should be removed. In doing this, care must be taken not to wound or cut away any portion of the gum margin, for upon the preservation of the gum depends for the most part the renewal of lost tissues. The root will remain denuded as far as the gum has been destroyed. The pockets formed about the roots should be injected with peroxide of hydrogen to cleanse the parts, and to remove pus and all foreign matter. To inject the peroxide of hydrogen, and, indeed, any of the remedies, use a syringe having a straight and a curved canula. The canula is to be well introduced at both the mesial and distal sides of the neck of the tooth, so as to cleanse the inter-alveolar parietes which form the seat of disease. I believe the use of the syringe for applying the remedy to the affected part to be of very great importance, for without it one cannot apply the agent used directly to the affected parts, except in a very dilute form.

After thoroughly cleansing the parts by the use of H_2O_2 , inject the sulci about the teeth with a 20 to 30 per cent. solution of commercial sulphuric acid, which will be found very effective in constricting the gums and removing from the tissues that condition of extreme congestion. The acid should be allowed to remain for two or three minutes, and then neutralized by the use of carbonate of sodium. Syringe the parts with tepid water to remove all debris, and as a final dressing use sulphate of quinia made into a paste with some of the essential oils, as they are not so readily acted upon by the fluids of the oral cavity. This paste should be carried into every pocket where there is disease. If any of the teeth are loose, they should be supported by means of ligatures, or if they will require permanent support, gold clasps made to fit the teeth accurately and attached to some of the adjoining teeth will be found to give satisfaction.

The patient should be seen, at least, twice a week, so that the parts may be washed out with H_2O_2 . This may be followed by the injection of phenol camphor, or with a solution of one part of carbolic acid to two parts of oil of cinnamon, which will be found more agreeable. This treatment is to remove septic matter and to

stimulate the tissues to their normal vitality. Usually when a decided disposition to heal is shown, the treatment may consist in simply keeping the parts free from foreign matter. The patient should have a wash which has stimulant and disinfectant properties, and for this purpose the following wash is good: Oil of cinnamon, 1 part; carbolic acid, 2 parts; and oil of gaultheria, 3 parts. This may be diluted with lemon oil to about one-half its strength, or may be used without dilution by placing half a dozen drops on the brush when washing the teeth and gums. The more assiduously the patient assists us brushing his teeth, two or three times a day, using a soft brush and the mouth wash recommended, the more favorable will be the results of our treatment. Therefore, impress upon the patient, that your efforts will be without avail if he does not persevere in cleansing his teeth in the most thorough manner. The most important part of this treatment comes under the head of prophylaxis, for it is deficient care of the teeth and gums that is the chief cause of this local lesion which, once present, endangers every one of the teeth. In the case of young patients, who present deposits of concretion under the gums, make every effort to carefully remove them, twice a year, and persuade the patients to undertake the rational care of the teeth and gums, which is so frequently neglected. Attention to the gums must be more strongly insisted on; without it we can expect no success whatever in our treatment of the disease under consideration. The advantage, however, which patients derive from carefully cleansing their teeth of concretions of tartar, is, as is generally believed, far greater; and the more the dentist directs his efforts in this direction, the more good will he do.

Adhesion *vs.* Atmospheric Pressure.

By E. A. TESKEY, L.D.S., St. Thomas, Ont.

Dr. Moyer exhibits quite a glow over my treatment of his criticism, and complains that I have left his arguments unnoticed, ridiculed science, that I misquote his learned dissertations, and am ignorant of the first principles of physics, etc. I have re-read his article, and must say that I have left no argument bearing on the issue unnoticed, but by branching off on kindred topics I might

have given him more extended notice, but space is too precious. Science I profoundly respect, but I cannot say so much for those so-called axioms which, when intelligently considered, contain not a particle of truth. Of physics, what I know is but a drop in the bucket ; but I have learned that the pressure of the atmosphere is constant at about fourteen and one-half pounds to the square inch, a knowledge that serves me well. As to the charge of misquoting, I made no attempt to give the exact words ; I only gave samples of his style, and in that the critics will bear me out. Dr. Moyer has apparently failed to grasp the point under discussion, but seized upon a passing opinion I expressed as an excuse to quote his doubtful experiments, to prove that the dental air chamber can be evacuated, but appears conscious that there is another force, for he says, " All I claimed . . . was that they increase the retentive force that *already exists*." This force that already exists can be very properly called adhesion, and were I to grant the possibility of evacuating the dental air chamber, it counts little against the premises that adhesive attraction is the principal force exerted in the retention of artificial plates. For argument, I refer the readers of your Journal to my last article in the March number, when dealing with the thimble experiment (which, by the way, Dr. Moyer passes over very lightly, being evidently not much in love with the result), and which has remained practically unanswered, but all will understand my meaning. He puts forth a comprehensive but indefinite claim of support by all the authors and colleges as well as dentists, forgetting that one man with the truth is always in the majority. If he will open the "Britannica" at "Adhesion," and in the last complete sentence of the first column, on the 153rd page, he can read, "This force is almost entirely independent of atmospheric pressure," which should settle the author question, and dispose of the next assertion, which is his repeated assumption that it is all due to atmospheric pressure. [This controversy is closed.—ED.]

Proceedings of Dental Societies.

Ontario Dental Association.

Minutes of the Third Annual Meeting of the Ontario Dental Association, held in the town of Barrie, July 21st, 22nd and 23rd. 1891.

The meeting opened Tuesday, 21st, at 2 p.m. President Dr. N. Pearson, Toronto, in the chair.

The minutes of the previous meeting were read and adopted.

The Secretary read letters of regret from Dr. Law, Chicago, and several members who were unable to be present.

The election of officers for the ensuing year was then taken up, and resulted as follows :

President, Dr. C. H. Bosanko, Barrie.

Vice-President, Dr. H. R. Abbott, London.

Secretary, Dr. R. G. McLaughlin, Toronto.

Treasurer, Dr. W. E. Willmott, Toronto.

The Secretary then proceeded to enrol members and collect fees.

The report of the Committee on Membership and Ethics was presented, and, after considerable discussion, resulting in a number of amendments, it was adopted.

Meeting adjourned at 6 o'clock.

EVENING SESSION, 8 o'clock.

Dr. W. George Beers, Montreal, read an able and interesting paper on "Dental Legislation," which deservedly brought to Dr. Beers a hearty vote of thanks from the members present.

Dr. H. T. Wood, of Toronto, then took up the subject at considerable length, and was followed by Drs. J. B. Willmott, Leggo, Roberts, McLaughlin, and Lennox.

The new officers were, with considerable ceremony, conducted to their respective positions.

The retiring President, Dr. Pearson, of Toronto, then delivered the annual address, in which he dealt very ably with many matters in reference to the education and training of the dental student. The paper was listened to with interest and profit by an appreciative audience.

Dr. Ward followed the paper with a few remarks.

At this juncture Dr. Woolverton brought in a notice of motion to add a clause to the constitution providing for the appointment of auditors.

Moved by Dr. J. G. Roberts, seconded by Dr. F. J. Brown, that the following members be a committee to consider amendments to the Dental Act, and report at the meeting to-morrow night: Drs. Lennox, Leggo, Woods and Beers.—Carried.

The meeting then adjourned.

WEDNESDAY MORNING, 9 o'clock.

A paper on the "Treatment of Deciduous Teeth," by Dr. W. A. Leggo, of Ottawa, led to a lively discussion of the subject by Drs. Roberts, Spaulding, Johnson, Klotz, McLaughlin, and J. B. Willmott.

The notice of motion providing for the appointment of auditors was then considered, and carried.

The President accordingly appointed Drs. Bennett and Sudworth as auditors.—Carried.

Moved by Dr. W. E. Willmott, seconded by Dr. Eidt,—That the Committee on Constitution hand over to the Secretary a copy of the constitution and by-laws as adopted, and that the Secretary have printed 600 copies of the same, and have sent one copy to each licentiate of the Province.—Carried.

Dr. J. C. Roberts, Brampton, then read a paper on "Root Filling," and at once the smouldering embers of old fires were stirred into new life, and such materials as oxy-chloride of zinc, gutta percha, and saturated cotton were held up to the professional gaze by Drs. W. E. Willmott, C. N. Johnson, J. B. Willmott, and E. H. Eidt. Dr. Roberts closed the discussion.

The report of the committee appointed to propose some amendments to the Dental Act was then brought forward, and on motion of Drs. Lennox and Kilmer, it was received. The Association then considered the report, and on motion of Drs. Lennox and Roberts, it was referred back to the committee.

The meeting adjourned.

WEDNESDAY AFTERNOON, 2 o'clock.

Dr. C. N. Johnson read a paper on "The Preparation of Cavities," in which some valuable information was given. Special attention being called by the essayist to the preparation of the cervical margins of proximal cavities. Dr. J. B. Willmott and Dr. W. George Beers added some further points on the subject.

Dr. Johnson then read his second paper, "A Plea for Gold," in which he set forth the many advantages of gold filling over the plastics, and strongly urged the dentists, especially those practising

outside the cities, to endeavor to educate their patients up to the standard of using gold more generally in bicuspid and molars.

Dr. H. Kilmer, St. Catharines, read a carefully prepared paper on "Pyorrhea Alveolaris."

The discussion was opened by Dr. A. W. Spaulding, and continued at some length by other members.

WEDNESDAY EVENING, 8 o'clock.

The Treasurer, Dr. A. W. Spaulding, presented his report, which was received and adopted.

The Auditors' report was also received and adopted.

The Committee on Proposed Amendments to the Dental Act then brought in its report, which was read by Dr. Lennox. On motion of Drs. Brown and Roberts, it was received.

Moved by Dr. Willmott, seconded by Dr. Lennox, that Dr. Woods' name be struck off the committee.—Carried.

Moved by Dr. Lennox, seconded by Dr. Cleary, that the report be adopted.—Carried unanimously.

Moved by Dr. J. B. Willmott, seconded by Dr. Klotz,—That, in the opinion of this Association, it would be desirable to have each licentiate vote for all seven members of the Board of Directors.—Carried unanimously.

Moved by Dr. Brown, seconded by Dr. Cleary,—That, in the opinion of this Association, the annual fee should not be more than four dollars.—Carried.

Moved by Dr. McLaughlin, seconded by Dr. Leggo,—That, in the opinion of this Association, it would be advisable to extend the lecture course for students in dentistry from two to three sessions, and the term of pupillage in proportion.—Carried.

The following Executive Committee was then nominated by the President and elected by the Association: Drs. Brown, Oakley, Richardson and Klotz.

Drs. A. W. Spaulding, Toronto; O. H. Zeigler, London; and E. H. Eidt, Stratford, were appointed to constitute the Committee on *Membership and Ethics*.

Moved by Dr. Lennox, seconded by Dr. S. Woolverton,—That Dr. G. McLaughlin, Toronto; Dr. H. R. Abbott, London; Dr. J. G. Roberts, Brampton; Dr. W. A. Leggo, Ottawa; and Dr. F. Kilmer, St. Catharines, be a committee to prepare the circular to the licentiates, specifying the proposed changes in the Dental Act, Dr. McLaughlin as convener.—Carried.

Charges of violating certain clauses of the code of ethics of the

Association were at this juncture brought against three members of the Association.

Moved by Dr. Klotz, seconded by Dr. Lennox, that these charges be referred to Committee on Membership and Ethics.—Carried.

Dr. Woolverton, London, then read a paper on "Diseases of the Antrum," which was well received, and proved, from the doctor's illustrations, to be very interesting.

Dr. Brimacombe, Bowmanville, opened the discussion, which was carried on by several of the members.

It being past the time for adjournment, Dr. Richardson asked that his paper on "Sensitive Dentine" be not asked for. This was granted on condition that the paper be handed in for publication.

The meeting then adjourned.

THURSDAY MORNING, 9 o'clock.

The Association, according to instructions, adjourned to the commodious offices of Dr. Bosanko, where the clinics were to be given.

Dr. C. N. Johnson, Chicago, gave a clinic of a gold filling in the mesial surface of a lower second molar, using the hand mallet for condensing.

Drs. Spaulding and Lennox demonstrated the powers of hot nitrous oxide gas in soothing sensitive dentine, each using his own peculiar apparatus.

Dr. N. Pearson gave some practical hints on regulating, from models of cases in hand. Also the powers of a new local anæsthetic in extracting teeth was tested by a few of the members.

In the afternoon, the members were treated to a four hours' sail on Lake Simcoe, by Dr. Bosanko, of the town of Barrie. During the much enjoyed trip, speeches, votes of thanks, songs and yarns were freely indulged in by the entertained members.

R. G. McLAUGHLIN, *Secretary*.

Eastern Ontario Dental Association.

By J. C. BOWER, *Secretary*, Ottawa.

BROCKVILLE, *July 2nd, 1891.*

The twelfth annual meeting of the Eastern Ontario Dental Association was held in Brockville, on July 2nd and 3rd, 1891.

Meeting called to order at 4 o'clock p.m. President Dr. J. H. Parnell in the chair.

The following members answered to the roll call: Messrs. George H. Weagant, Morrisburg; C. J. Bracc, J. C. Stewart, D. V. Beacock, Brockville; G. E. Hanna, Kemptville; R. E. Sparks, L. Clements, J. H. Clarke, Kingston; C. A. Martin, J. Robertson, J. H. Parnell, F. Pearson, J. C. Bower, Ottawa; S. B. Chandler, Toronto; A. A. Stanley Burns, A. H. Weagant, Smith's Falls; H. S. Wood, Toronto; A. J. Smith, Prescott; J. H. McCullough, Perth; J. Mansel, Smith's Falls; W. G. Beers, Montreal.

The President, Dr. Parnell, delivered the following address:

GENTLEMEN,—Another official year has been told off on the dial-plate of time, and our annual meeting again brings us together for the purpose of deliberating on measures that will advance the best interests of our noble profession. Twelve years have passed since our Association was organized, and our first meeting held in the beautiful town of Brockville. At that meeting, if my recollection serves me right, Dr. Clements, of Kingston, was chosen our first president, and your humble servant, first secretary. Our membership roll then numbered some sixteen. As we take a retrospective glance over these years, we cannot but congratulate ourselves on the great advantage to ourselves and the profession at large of these annual gatherings, opening up, as they do, an avenue for the interchange of individual ideas and discussions on the improvements of modern dentistry. Since the establishment of these organizations we note with satisfaction the higher scope and increased study required to qualify a student to attain that degree of proficiency which is absolutely necessary to assure success in our profession.

During the past year certain amendments to the Dental Act were proposed, and submitted at the last session of the Ontario Legislature by certain members of the Board. I regret that such important legislation should have been enacted without receiving the serious consideration of the dental profession of Ontario. In April last, when that measure was before Parliament, we accidentally came into possession of a copy of the proposed amendments, in consequence of which a deputation went to Toronto, consisting of G. E. Hanna of Kemptville, George Hutchinson, J. C. Bower, Messrs. Pearson, Davidson, Ira Bower, Robertson, Armstrong, McIlhenny and myself. The deputation were cordially received by the Hon. Minister of Education, before whom we stated our case, Drs. Willmot and Wood, with their solicitor, being present. It appears extraordinary to me that such a measure should be framed and laid before Parliament, without the knowledge of the Secretary of the Ontario Board. But we have it on their own authority that

such is the case. We might reasonably ask who are the authors of these amendments to the Dental Act? In addition to this very important matter, there are other questions pertaining to our profession which will be brought before you.

Before closing, I desire to tender the members of this Association my sincere thanks for the honor they have conferred on me by electing me your president for the past year; and, I might say, that the best interests of the Association and its future usefulness, largely depend on the efforts of its members working in harmony together, and I trust that the result of our deliberations will tend to promote and foster a lively interest in all that pertains to the advancement of our noble profession.

Dr. Charles Martin, after reading the circular which was issued when the society was organized, read the following:

This is the circular issued which resulted in the formation of our Eastern Ontario Dental Association. Considerable enthusiasm was manifested amongst the members enrolled, and it was anticipated that nearly all, if not all, the dentists in Eastern Ontario would become members. Our anticipations have not been realized fully; however, much good has accrued from the efforts of the staunch adherents. By our union we have been able to cope with our western confreres (who, bye-the-bye, are composed largely of intellectual and social gentleman), in having a voice in the ministrations of our dental laws, and keeping one or two representatives on the Board of Directors of our Dental College. It has afforded us the means for discussing the rights of the licentiates, and a pleasing opportunity to exchange views regarding the progress and welfare of our important profession—a profession which is growing daily more and more of importance in the estimation of the public. Our meetings have, to a large extent, been the means of dispelling the little jealousies existing heretofore in localities, and somewhat modifying the claims of superiority of some individuals.

Still there are some who will not take any part in our proceedings unless they can be at the head; others, from timidity or other causes, do not try to lend active aid. Much valuable assistance is and has been lost to us for want of an effort on the part of many of our capable men; this has been proven in the past by the able contributions produced after much urgent persuasion. Then there are those who (I regret to say it), will not join any association of dentists, from fear of having to comply to some code of ethics, which might check them from taking mean advantage of their collaborators, such as condemning operations, or slandering, offering services for less fees, or making special concessions, always, of course, for special patients, and exceptional cases.

In their isolated position, they resort to menial condescensions, sacrificing professional dignity in acquiescing to unreasonable

demands from ignorant and arrogant patients, thereby lowering the status of the profession in the estimation of a portion of the public. Is there any pecuniary benefit accruing from such conduct? I question very much that there is; at all events it is but temporary; it cannot be lasting, as it taxes the dentist sorely. Each succeeding class of graduates from our college show an increasing tendency to elevate the standard of our profession, and greater harmony exists with regard to their conduct towards the public. May the spirit of co-operation go on increasing, then a uniform attitude towards our patients will certainly result, and be a benefit to all concerned. Let us continue our assemblies with increased numbers and enthusiasm. Crush out the feelings of jealousy that sometimes arise. Let us applaud the meritorious, and give full credit to those who show superiority of skill and evidence of inventive genius. We should show gratitude for their efforts, no matter how feeble they may be. There is always something to learn from those who contribute. If one cannot excel, he can at least attain equal proficiency to those with whom he associates, by conversation and observation. We should not look forward to our meeting as a task on our time and resources, but rather as a pleasant outing, a pleasing reunion, a happy meeting, and genuine recreation.

At this anniversary meeting I cannot refrain from expressing my gratitude and feeling appreciation, for the kindness shown to me by the members of this Association, and for the honors repeatedly conferred upon me. I know my incompetency to fulfil your desires as a representative; I feel my inability to represent you as you deserve; but, be assured, I have acted conscientiously in my endeavors to fulfil the trust confided to me.

Out of the many well educated graduates now joining our ranks, a better qualified representative will no doubt be chosen for the future, that our rights will continue to be guarded and protected with increased energy and ability.

Officers were elected as follows: President, J. H. Parnell, Ottawa, re-elected; Vice-President, C. J. Brace, Brockville; Secretary-Treasurer, J. C. Bower, Ottawa.

Dr. Beacock read a paper on "Caries," which was discussed.

One feature of the meeting was to draft resolutions petitioning the Board of Directors to amend the Dental Act.

A number of papers are promised for next year's meeting.

Anticipating from the circular that a lively and important discussion would follow, we engaged two stenographic reporters, intending to give a complete report of the proceedings. As it was apparent that a good deal of misapprehension existed, and as the

discussion became chiefly personal, and ended mostly in smoke, it is, perhaps, as well that the stenographers were a failure. Neither head nor tail can be made out of their report.

British Columbia Dental Association.

The First Annual Meeting of the British Columbia Dental Association was held in Vancouver, on July 17th, and continued two days. There was in attendance nearly all of the practising dentists of the Province. The following is the programme of the proceedings, which, together with the discussions thereon, which were lively and instructive, tended to make the convention both pleasant and profitable: Opening address, T. J. Jones, L.D.S., President; "Caries and Necrosis," A. J. Holmes, D.D.S.; Clinic, "Bridge-work," W. R. Spencer, D.D.S.; "Implantation," A. R. Baker, D.D.S.; The Relation of Food to the Teeth," G. A. B. Hall, D.D.S.; "Advanced Practice," R. F. Verrinder, M.D., D.D.S.; "Dental Treatment of our Juvenile Patients," J. M. McLaren, L.D.S.; "Pyorrhea Alveolaris," C. H. Gatewood, D.D.S.; "Anæsthesia," Lewis Hall, D.D.S.; "Incidents of Practice," C. E. C. Brown, L.D.S.; Clinic, "Casting Aluminum Base," J. M. McLaren, L.D.S.

The following officers were elected for the ensuing year: Dr. T. J. Jones, Victoria, President; Dr. C. A. Jackson, Vancouver, First Vice-President; Dr. G. A. B. Hall, Nanaimo, Second Vice-President; Dr. A. C. West, Victoria, Secretary-Treasurer; Executive Committee, Drs. Holmes, Richardson, and Verrinder.

The next meeting will be held in Victoria, on July 18th and 19th, 1892.

A. C. WEST, *Secretary*.

Correspondence.

Our Defective Act of Incorporation.

SIR,—I wish to direct the attention of the Ontario Board, to a few facts anent the securing of protection for the dentists of the Galt district, against the disgraceful conduct of some licentiates, who have offices and who do business in this part of the Province.

On the 15th of November last, a party not having a license was up on three charges of practising illegally, upon two of which he was convicted, with costs amounting to \$48. He then inserted a letter in a local paper, to the effect that for the next thirty days he would extract teeth *without charge* and without pain, by the use of his new local anæsthetic. Many went to him, some of whom

left money at the house. At the same time he performed other operations, but the dentures were generally inserted by another party, who is an L.D.S. In January of this year he was again before the Courts, but we were defeated, on the grounds that the money was paid to his wife, on the door-step, as a gift! He also defeated us on three cases from the country, where he and the witnesses swore that they paid only for tooth powder! A student went to him; had two fillings inserted, and paid him \$1.50; laid the information and swore to the facts. The defendant swore that he was not paid, and as it was one man against another, he was acquitted. Others for whom he operated, after telling the detective the amounts they paid, swore that they had left nothing.

On the whole, this party was brought before a magistrate on thirteen different charges, three of which came up for a second hearing, and we have won only three, and those before he was as well acquainted with the Act as at present.

Our witnesses are adverse to swear against a man who tries to make the public believe that other dentists are persecuting him; and, unfortunately for public opinion, the public do not realize the injury that sympathy with such illegality can do to our profession, as well as to themselves. It is strange how otherwise intelligent communities, do not seem to appreciate our desire to enforce a law, which has as much reason to be respected as any other law. It is not strange why a few men should be so base as to willingly drag their profession through the mire. They make a few more dollars, and to them that is better than any code of ethics, or the respect of their confreres.

Is it not the duty of the Directors of the College to appoint a good detective and bear the expenses of earnest prosecution? What is happening here may happen in every other district of Ontario, and we do not ask for any favor from the Board to which we, like other licentiates, are not entitled.

Yours truly,

ONTARIO L.D.S.

[This is a very glaring case of wrong and injustice, and we understand that it will have the special attention of the Ontario Board.—ED.]

Editorial.

Ontario and British Columbia Dental Associations.

The next issue will contain some of the papers read at these meetings. Essayists wishing extra copies should notify the publisher early next month.

Read the Advertisements.

The advertisements in a dental journal are an education. Unfortunately, some few dentists read nothing else! Some, perhaps, never look at them. Especially where they represent varied and competitive interests they are of value. It is the next best thing to walking through the depots. Our advertisers have a claim upon our readers.

Florida vs. New Brunswick.

Even Florida (May 25th, 1891) does not consider dental diplomas sufficient to entitle any one to practise dentistry in that State. The constituted Board of Examiners grants certificates to all applicants "who have obtained a diploma from a reputable dental college, *and who pass a satisfactory examination*" before the State Board.

The Professional Outlaw.

Some men are so constituted that they can no more act honestly than they can fly. The very attempt makes them ill. Apart from their innate selfishness, their instincts as naturally run to knavery as the St. Lawrence runs to the sea. The Pythagoreans, who believed in the doctrine of metempsychosis, were, perhaps, right after all; for do we not see specimens of humanity, even in our own boasted age of civilization, into whose being seem to have been transmigrated the instincts of the serpent and the hog. It matters not into what occupation they enter, they are sure to do something dirty. They could not sweep a chimney, or clean a

drain, without disgracing even the self-respect that chimney-sweeps and the lowest laborers possess. They are made of the sort of clay that prefers to reach an aim by crooked means, rather than by scrupulous and honorable conduct, even if the latter were to give them half the trouble. One might despair of the profession were it not for the fact, that the vicious and unscrupulous are not peculiar to the healing of the body any more than to the healing of the soul. There are rascals in the very pulpit. We must expect them in medicine and dentistry.

There is always this consolation—that honesty and unselfishness come right in the long run. It pays to be a gentleman. In spite of theatrical training, it is doubtful if ever a low-minded man could act the gentleman, no matter how much he tries. The cloven foot always appears under the mask of gentility. It is easier for a true gentleman to act the knave. We must remember this in dealing with the professional outlaw, who voluntarily puts himself outside the pale of professional respect by reason of his instinctive immorality. Let young men entering practice, pause and count the cost of playing the role of the advertising liar and fraud. However much the public may be humbugged, the profession know just how to measure transgressions of the code of ethics. A gentleman, however humble, may rise to the highest honors his confreres have to bestow. An advertising fraud, though he repent in sackcloth and ashes, can *never* regain the respect he deliberately ignored.

“Waiting To Do Something Great.”

Thousands of able writers never publish anything, because they are waiting for the time and opportunity to write something great. The result is, they are no nearer their ambition when they die, than when they were born. A quaint friend of ours has a hobby in the shape of an affection for the kangaroo. He owns a pair of them. He is a practical artist in prosthetic dentistry. If you visit his laboratory, you get many hints that would enrich the pages of any dental journal. But he has never published a line, either on the kangaroo or on dentistry, though he has over a hundred pages of original manuscript on the teeth of his pet Australian mammalia. One day he demonstrated to several of us the beauti-

ful and curious extension of the pulp chamber in an incisor to the tip of the crown, and showed us how nature had given man greater protection than the kangaroo, in the thickness of the hard structures at this point. He intends "some day" publishing his manuscript, but he has kept it twenty years, and will likely destroy it or leave it for posterity. We know that "great minds run in circles," and if one has a new idea, and hopes to get credit for it, he must out with it in the rough, and not wait for the "divine afflatus," or for time to polish. Procrastination is the thief of ideas as well as of time. A claim to priority is only insured by prompt publication.

We imagine that most of us have ideals we can never reach. Most of our readers are reluctant to contribute, because they wish to do something elaborate. Our journals are filled with an immense amount of padding; ideas spread out over a dozen pages, when they could be embraced in as many lines. One of the best thinkers in the profession is a mighty sinner in this respect. Whatever subject he writes about, however practical or scientific, he always starts back at the time of the Deluge. He is engaged on a monograph on the teeth of Adam and Eve. It is all very well to have ideals and to strive to attain them. We have had an ideal of a dental journal for twenty years; but that did not block the birth of this bantling. Let us all do the little at our hand, and by-and-by the great may come. If it does not come, it is, at least, some satisfaction to feel that we have done something to make it possible for our successors.

Post-graduate Courses.

With a practical zeal which characterizes our Western friends, the Chicago College of Dental Surgery, of which Dr. Truman Brophy is Dean, inaugurated the above course specially for busy practitioners who want to keep up with the times, and for graduates who realize that there is more to learn after than before graduation. We are glad to learn from several sources that quite a number of our Canadian dentists in Ontario will attend the session next spring. It will only last one month, and, while not intending, by any means, to take the place of the regular winter course, it will be of inestimable value to practitioners who cannot afford a prolonged absence from the office.

What Is a "Quack?"

Occasionally, a dentist who has qualifications that might make him respectable, decides to wear the mask of the charlatan. Those who know him, are willing to admit that he is not a born rascal, however close he comes to being a born fool. No one asserts that he is an out-and-out impostor. Allowing for want of experience, no charitable confrere—and there is a vast amount of kindly feeling towards young beginners—would put a bar in the path of honorable ambition. Still, when one who has the golden opportunity of a respectable career before him resorts to public bombast, undue assumption of superiority, and other tricks of the ignorant pretender, he has, among all honorable practitioners and societies, been classified as a Quack. His geese may really be all swans, and with his much cry there may be much wool, but just as sure as a man apes the arts of a Quack, so will he eventually behave. The actor who always takes the villain's part in the play, insensibly degenerates in his morals. However skilful a dentist may be, if he plays the empiric he will glide into its regular practice. Exaggeration easily ends in unconscious, if not conscious, lying; and boasting is so kin to falsehood, that the professional boaster is always regarded, like Montaigne's page, as a man "who is never found guilty of telling the truth!"

A Quack, according to the dictionaries, is "one who boasts; who talks noisily and ostentatiously; who practises the arts of quackery." He may be "a boastful pretender to medical (or dental) skill he does not possess; an ignorant practitioner;" or he may be fairly able, and yet be quite as much of a Quack as the *bona fide* impostor. He resorts to lying when he declares that he can perform operations no one else can perform; that he possesses improved methods no one else can procure; that he can give ten dollars' worth for one, and generally perform miracles upon dead bones.

Just now there is a wave of quackery across the Dominion, and some *lie-centiates* are using the theatrical and circus arts of attracting attention, so well known to knaves who practise medicine and dentistry. We learn of several glaring cases in Ontario, of men whose decency no one would have impugned a year ago, descending to the most ignoble devices, to bring themselves before that

portion of the public, who stand with open mouths ready to be duped. A man may be a gold-medallist, but if he "practises the arts of quackery" he is a Quack. He may have apostolic benedictions poured upon him every hour, but if he says he alone can do operations which every ordinary dentist has been doing for ten years, he is a Liar—and he knows it. *The public should know it too.*

Code of Ethics, Article II., Section 3.

"It is unprofessional to resort to public advertisements, cards, hand-bills, posters, or signs calling attention to peculiar styles of work, lowness of prices, special modes of operating, or to claim superiority over neighboring practitioners; to publish reports of cases or certificates in the public print; to go from house to house to solicit or perform operations; to circulate or recommend nostrums; or to perform any other similar acts."

Bearing upon the maintenance of professional character among practising dentists, this section of the code adopted by the American Dental Association in 1866, ought to meet with the approval of all right-minded men. We confess, however, that we do not quite sympathize with the use that has been made of it, in its application to the few who have risen above the ordinary run of dentists, as inventors and discoverers. The late Dr. McQuillen, then editor of the *Cosmos*, opposed the code at the above convention, as "unnecessary for gentleman, and its enforcement impracticable upon those who were not," and at a subsequent meeting of the Odontographic Society of Pennsylvania, a resolution was unanimously adopted, declining to accept it, upon the ground that it was an interference with the independence of local societies.

Circumstances may occur when it would, perhaps, be wiser to relax its stringency. For instance, a dentist, after years of investigation and the expenditure of thousands of dollars, unaided in any way by confreres or societies, perfects or invents a boon to the profession and the public. While rivals, it may be, in the same town, are reaping the reward of selfish devotion to practice and money-making investments outside of dentistry, he has impoverished himself and his family while in his researches. He does not propose to monopolize his discovery. His practice has been

seriously curtailed. He loses his patients while he is in his laboratory. To ask him to give away his discovery to men who neither helped nor appreciated him is unreasonable; it is uncharitable. A rival who invents a new mowing machine is perfectly "proper," though he may never contribute an idea or an implement to his profession. There are scores of petty "inventions" which have no merit, and whose authors cannot pretend to be placed side by side with a Barnum or a Land. But when a dentist devises or discovers something which is generally recognized as valuable, and which his confreres are glad to obtain; when societies ask him and pay him to give clinics, and, in spite of arrogant sneer, he demonstrates its value, his effort merits open and fair encouragement. If the framers of the code intended it otherwise, why was a resolution offered in 1867, to give a prize of \$5,000 to any experimenter who produced a permanent white plastic filling? In 1870, at the Nashville meeting, Prof. Buckingham offered an amendment to the constitution, as follows: "No person shall be a member of this Association who holds a dental patent, or is or shall be interested in one." The motion was lost. At the same meeting \$1,000 was voted to the late Dr. Barnum for his discovery of the rubber dam. Dr. Barnum died poor. If we are to expect our discoverers to spend their lives and money for our profit, we must devise some better way of remunerating them than paltry testimonials and votes of thanks. The story of Dr. Barnum is not an isolated one. Some of the most critical and arrogant disparagers of patentees never did an unselfish thing for the profession. When an inventor is solicited and paid to exhibit his new ideas, he should at least not be treated like a malefactor, whose genius we are hungry to use, but whose "methods" may not square with our convictions. If poverty is to be even the chance reward of genius, codes of ethics are tyrannical. Members of societies who depart from the code, have no right to complain if they are forced to conform to them, or forced to retire. But it seems to us, that an inventive genius merits some substantial reward for the labors of a lifetime. How shall we encourage this, and yet keep such men in our societies?

Abstracts from the Journals.

The Use of Air-Chambers.

Dr. William Wallace, of Glasgow, has an interesting article on the use of suction cells, in the February number of the *Journal of the British Dental Association*, which contains much important information on this subject. He starts off by pointing out that air-chambers are not really vacuum chambers, because the mucous membranes contain gases with which these cavities are always necessarily filled. If it were possible to make them vacuum chambers, the palate would have to withstand a force equal to that which would sustain a column of water thirty-two feet high, and in cross-section equal to the area of the air-chamber. In the construction of an upper denture the most important point, he claims, is to make the circumference, and not the centre of the plate, the part which rests firmly against the tissues. Air-chambers, while intended for a different purpose, bring about this result incidentally, and in constructing plates without them provision must be made for relieving the roof of the mouth from pressure. This may be done either by reducing the height of the alveolar ridge in the model, or heightening the level of the palatal surface. Such a precaution is rendered necessary by the fact that there is a hard ridge in the median line of the palate, and that a plate made to fit an exact model of the roof of the mouth will always rock more or less, in proportion to the amount that the other tissues of the palate yield more readily than the hard median part. The growth of the palatal tissues into the cavity of an air-chamber, he attributes partly to the fact that at that particular point they are subject to no pressure from either the tongue or plate, but principally to the irritation due to accumulating mucous secretions and food debris. These set up an irritation which leads to chronic inflammation and hypertrophy. Such a growth should not be used in order to hold a plate in position, and to bring it about in order to prevent lateral motion, is to make the palate fit the plate instead of the plate fitting the palate. To retain an upper plate in position, he looks upon as a purely dynamical problem. Equilibrium having been obtained by having the circumference of the plate press hardest on the palate and alveolar ridge, a number of forces combine to hold it in position. It may obtain a mechanical grip of the upper jaw by catching over the outer margin of the alveolus—the stickiness of the saliva and capillary attraction also assist—and if the extreme edges fit tightly to the gum, downward traction

is resisted chiefly by suction. To secure these forces at their best the plate should fit closely at the edges, and be free at the centre, but not so free as to permit the inclusion of any air when the piece is pressed home. That there should be no air between the palate and the plate anywhere, follows from the law that the volume of gases varies with the pressure. In the case of a suction plate, when we relieve the pressure of the atmosphere by dragging on the plate, the air in the cavity expands, but offers no resistance. If, however, the cavity had been filled with glycerine, or had there been no air-chamber, the expansive force of the contained air would need to have been exerted to remove the plate.

Influence of Second Dentition.

In the *International Dental Journal* for June, Dr. Newton, of Montclair, N.J., treats of the physiology and pathology of the second dentition from the standpoint of a practising physician. The period of life from birth to the second dentition he divides into three periods of about seven years, viz., first, until the complete eruption of the first four permanent molars; second, until the complete eruption of the second four permanent molars; and third, until the complete eruption of the third four molars. The first period, *i.e.*, from birth to seven years of age, from a physiological standpoint, is the most important period of human life. During this period the child masters the use of his senses, learns to reason, learns an elaborate and difficult language, and frequently has attained considerable proficiency at school. At its conclusion the brain has attained very nearly its growth, and its subsequent enlargement is very slow. During the second period the rudiments of education are secured, the character is largely formed and a fair indication is given of the way in which a child is likely to turn out physically and mentally. This second period is a critical one, and many of the maladies peculiar to it are due to the second dentition. What are known as "mucous diseases" are oftener due to second dentition than anything else. The child becomes emaciated and weak, the skin becomes sallow, dry and rough, and the pulse feeble. The emaciation and debility suggest tuberculosis and frequently cause much alarm. Although mucous disease is not dangerous in itself, it predisposes to other more fatal diseases. Diarrhœa is a constant attendant on second dentition, and usually arises in the spring or fall. The troubles commonly attributed to worms, the approach of puberty, malaria, etc., he believes in most cases can be traced directly to the eruption of the second teeth. Paralysis is frequently caused by teething, the recovery in some cases being rapid, while in others the limb atrophies, and cases are on record

where the disease has gone on to asthma and palpitation, ending in coma and death. In young girls the eruption of the second molars is often associated with hysterical symptoms, which are usually attributed to the approach of puberty. Indeed, the arrival at puberty itself may be retarded or rendered painful and difficult by interference with dentition. Hysteria, chorea, and even epilepsy are often cured by lancing the gums over erupting molars, and it is even held by some that difficult or retarded menstruation is frequently caused by difficult dentition. Dr. Mulveany says that he was frequently consulted by anxious young husbands because their youthful partners did not conceive. He always assured them that when their wives got through their teething they would have children, but that they were not likely to become mothers until quite over the infirmities of childhood. In closing his article, Dr. Newton urges that the development of the teeth be promoted by exercise in chewing. He believes that the teeth of our people are constantly growing better, and that when the signs of a feeble constitution are more easily read, and the laws of health are better understood, the Americans will become the finest race on the face of the earth.

Resetting Teeth.

In the *Ohio Journal of Dental Science* for June, Dr. E. H. Rafensperger, of Marion, Ohio, outlines a very ingenious method of resetting the teeth of an old rubber plate on a new one, whereby much of the labor is saved, and the process made much less disagreeable than when performed in the ordinary way. In the case of a full upper denture of gum teeth, for instance, the articulation being correct, he takes an impression of the jaw and dismisses the patient, that being all that is required. He runs the cast in the usual way, and to it fits the outer rim of the plate, after having cut away the entire palatine portion with a fine saw, run along as near to the pins as possible. The rubber above the gums he also files away, leaving the teeth intact on a thin band of rubber, which fits the cast exactly as it fits the mouth. The waxing up and flasking is done as in an ordinary case, the plaster in the lower part of the flask being only allowed to run up to the gum sections, so that the teeth will all stay in the upper part. Before opening the flask is well heated, and, after the wax has been removed, the upper half is boiled for some time, when the old rubber will have become thoroughly softened, so that it can easily be removed with a pair of pliers, by taking hold of it at the heel. The case is then packed, vulcanized and finished in the usual way. The advantages of this method are that it requires less work than the usual plan adopted, that the articulation remains unaltered, that the pins come out nice and clean, and that there is no odor during the operation.

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Original Communications.

President's Address, British Columbia Dental Association.

By T. J. JONES, L.D.S., Victoria, B.C.

GENTLEMEN,—The interval of our separation has elapsed, and we are brought together, in accordance with our preconcerted plans, to inaugurate, in a more formal manner, the British Columbia Dental Association.

I greet you as individual members of a noble profession. It is fair to presume that we have accorded to us by the community in which we live our appropriate status, and that we each of us wield the influence to which we are justly entitled.

But what shall be the character of our Association, and what can we do for each other and the public around us? These are questions which address themselves to us on the present occasion, with great pertinence and fitness. Shall our organization become a mutual admiration society, or shall we lay broad and deep the foundations of an honorable structure, that shall wield an influence for good when we shall have passed away, as our fathers have gone before us? I trust that a mere existence will not satisfy the purposes and designs of those I see around me on this occasion. While it does not become me to dictate, it may, nevertheless, be appropriate to suggest. To save us from disintegration and disso-

lution, there must be a common interest, and that interest must be perpetual. We shall find this interest in our mutual improvement, if we do not withhold our individual contributions to the common stock. Now, there may be individuals who could get along very well without the aid of such associations; but I should do no injustice to such if I should say that no one man knows everything, and he must be a very dull scholar who cannot learn some valuable lesson from an inferior mind. It is the great aggregate of little things that constitutes the great mass, and if every member of this Association will contribute his mite, it will be found that each of us will carry home with him more than he brought. A single suggestion, a simple hint, is often of the greatest value, especially when we are pursuing a course of investigation or experiment, and have come to a standstill for want of a simple hint which some brother may supply.

Now, there are some things which we can never learn until we reach a given point in our mental operations. We must have the susceptibility even to make a hint available, and coming together as we will, each from his office or laboratory, with some special line of thought ever before us, it is but fair to presume that, while each of us may add to the common stock, all of us may be enriched as individuals. The mind is always quick when upon those subjects that most deeply engage our attention. How, then, is it possible, when so many are working in the same field, that we can spend a few days together, earnestly canvassing the same subjects, without deriving a marked advantage? He who never gets out of himself knows not what it is to live. We best serve ourselves when we are serving others well. Our object should be to make the most of ourselves by enlarging the scope of our own lives; and thus it will always be that, while we are nobly and honorably working for the public good, by a reflex influence, as certain as the law of gravitation, we are lifted up into a noble sphere of individual existence. This thought should ever save us from mean and petty jealousies. If a worthy brother can outstrip us in the race for personal eminence and distinction, let us not try to pull him down to our own level, but bid him "God-speed," and push on fast after him, till you meet him in the broad road to fame.

Dental science is kindred to medical science, and medical science

intermeddles with all knowledge. Let us have courage to follow wherever truth may lead the way, and we shall always be safe. Our Association contemplates the development of truth as it exists in dental science, and we have before us an important field to harvest. In some respects, we will reap the fruit of those who have toiled in this field before us, and have sown broadcast around them the precious seed which now waves as a golden harvest. In other respects, we are in a field of undeveloped thought. We are following a lead that will open up a new mine of professional treasures. Some of us come, picking up the precious grains which have been left unnoticed by others. But, let our relative positions be what they may, there is work enough for us all. We do not all excel in the same specialty. We do not all take equal interest in the same class of operations. Our peculiar genius and habits fit us for some one class of operations better than another. Some can scarcely endure the laboratory ; they prefer the operations of the chair. Others, following the bent of taste and of inclination, prefer dental mechanics. And this is well. Let each one follow the department best suited to his taste, and he will find that in such a sphere he will surely win distinction. But in our Association we bring together our various contributions, and we are all enriched together. In coming together thus, bringing with us the results of our varied experiences, and in the true spirit of professional courtesy and brotherhood, one result must certainly follow, to wit : the elevation of our noble profession as a whole, and our individual status. But, in order that we may reap the full benefit of this Association, it is quite important, it seems to me, that a strong effort should be made by all its members to see that it is enriched with elaborate papers on different branches of dental science.

Gentlemen, let us labor to this end. Let us leave such footprints behind us that those who come after us shall feel that we have not lived in vain. Perhaps I should apologize to you for detaining you so long from the business of this convention by my somewhat incoherent address ; but, throwing myself on your indulgence, I beg to express my fervent desire that we may live to see this, the British Columbia Dental Association, eminently successful and prosperous.

Caries.*

By A. J. HOLMES, D.D.S., L.D.S.

When the source from which osseous structures derive their nourishment and vitality is destroyed, death follows as a necessary consequence.

This occurrence is called necrosis, or mortification of the bone, and sometimes authors speak of it as caries.

But, as caries of the bone is generally classified as a separate disease, I will speak on that subject later on in my paper. Necrosis may occur in any part of the body, but I will confine myself to that part most necessary to the dental surgeon: the oral cavity, and principally the alveolar.

The trouble may occur in the alveolar of either jaw, but is more liable to take place in the lower than in the upper. This, no doubt, is caused by the smaller blood and nerve supply in the lower jaw, thus weakening its vitality under that of the upper.

Though it is a plain fact that the alveolar process in either jaw, although like other bones, supplied with bloodvessels and nerves, their recuperative powers are weaker; and then to be deprived of a portion of its delicate, life-giving substance, by necrosis and exfoliation, or other causes, the injury is not so readily, as is often in other osseous tissues, repaired by the restoring efforts of nature. Again, necrosis may be confined to the socket of a single tooth, but more frequently it extends to several, and often through a portion of the alveolar border, and occasionally the entire alveolar, penetrating a part or the whole of the jaw.

When teeth are subjected to necrosed loosening, as is plainly shown by the natural necrosis that nature supplies for the expulsion of the temporary, they become dark by the destruction of their pulp, and are ultimately removed and fall out. Exceptionally, a number can be made to remain firm, and become useful.

Of all these cases the condition of the pulp-chamber of such teeth as have lost their pulps should receive prompt attention, to prevent the discharge of poisonous matter by way of the apical foramen, as such sources of irritation will, until it is removed, prevent a proper and perfect healing.

At first, the indications of trouble in the jaw that precede necrosis is not to be distinguished from maxillary or alveolar periostitis. The necrosed portion may be limited to bone in direct relation with inflamed periosteum, frequently excited by scurvy, syphilis, certain eruptive fevers, mercurialization and action of phosphorus, or, extending deeper, it may involve the entire alveolar border, and perhaps the palate and into the Highmore antrum, if it be the upper jaw affected. As it progresses, instead of confining

* Read before the British Columbia Dental Association, July 17th.

itself to local or circumscribed swelling, the gums become congested and swollen over considerable area, unhealthy purulent pus oozes from the margin of the gums, detaching them from the bone, the teeth loosen, and in a few weeks the maxillary and alveolar plates also become disintegrated by the necrosed process. These pieces of bone lie dead and sequestered, bathed in pus.

In all cases of necrosis the ingenuity of the operator must be depended upon to overcome the difficulties that may present themselves. Consequently, no set rules can be given to accomplish their treatment.

I, in the first place, generally remove the loose roots or teeth that are past redemption, then make free incisions into the swollen area to give relief to the blood-pressure, and give free vent to the pus that may be collected under the periosteum. Syringe the parts out with a warm solution of Listerine, peroxide of hydrogen and carbolic acid.

Too much stress cannot be placed on the remarkable value of Listerine in these affections.

When the patient is suffering great pain, instruct the use of heavy doses of antipyrine and Dover's powders, also call attention to the importance of keeping the bowels active.

Dismiss for further development. My method of treatment thus far will aid to stop periostitis and osteitis, and prevent necrosis, which is generally the result of continuous inflammation. But, in cases that are so far advanced, giving signs of disintegrated necrosed bone substance, I find the absorption and extrusion of the dead bone may usually be effected by the use of a ten per cent. solution of aromatic sulphuric acid, brought directly in contact with the area of the diseased part.

My method of using it is to inject through the fistulous openings, and directly in contact with the diseased bone, by means of a hypodermic with a blunt point, keeping it there for several minutes, followed by a washing of H_2O_2 .

But, in extreme cases, where large sequestra are exfoliated and honey-combed carious bone is formed, I give assistance for their immediate relief by the use of the knife, aided by a four or a six per cent. solution of cocaine. Follow this by the weak sulphuric acid injections and mild washes, and in a short time we may generally dismiss our patient, cured.

But, before concluding the treatment of necrosis, and going to that of caries of the jaw, I wish to state that, after consulting many of our best authors as to the best treatment, I find that of Dr. J. T. Martin, to my opinion, a very good one. It is as follows:—

If seen in the early, active stage, give a good cathartic, say six to ten grains of calomel, followed in from four to eight hours by a large dose of saline cathartic, well diluted; follow this by ten to

fifteen grains Dover's powder, or equivalent of some other opiate, to allay all pain, and repeat the dose as often as needed. If the skin is hot and dry, give drop doses of tincture of aconite every half hour in water, until the skin is moist and the action of the heart is modified. . . .

By the action of these remedies the blood is diverted from the part, the pain checked, the irritation quieted, the force of the heart modified, and the general temperature lowered ; in other words, the part put at rest.

He says it is of great importance to keep the bowels active wherever there is inflammation about the head or face. Lance the gum, with free incisions, down to the bone.

He has two reasons for this: 1st. Local blood-letting relieves the blood pressure ; and, 2nd, it gives vent to any pus collected, thus preventing extensive separation of the periosteum, and extensive necrosis in many cases.

He then advocates the painting of the gums and parts freely with tincture of iodine, hot fomentations applied over swollen parts, and similar remedies.

We can plainly see that his treatment so far is to combat periostitis and otitis, and to prevent necrosis, caries or abscess, which are the results of continued inflammation.

He says that whenever necrosis of the lower jaw is discovered, the best method is to meet indications generally and locally, until the necrosed bone is separated from the living, and then assist nature in getting rid of the irritant by enlarging the opening and removing the sequestrum, or sequestra, as the case may be.

Keep the patient supported with remedies, as iron and bitter tonics. He also says that in these cases the supporting powers of quinine cannot be overestimated. Locally, the sinuses should be cleaned by stimulating alteratives, as solutions of iodine, Listerine, H_2O_2 , carbolic acid, etc., which will bring about a cure, if careful attention be adhered to.

CARIES OF THE ALVEOLAR PROCESS AND MAXILLA.

When acute form is present, it is associated with inflammation of the gums and periosteum ; periostitis being early observed.

It, like necrosis, is not very common, differing from the latter in being free from the odor, when kept cleaned, which characterizes necrosis. The causes are various, and one very common one is the pressure of the dead teeth and roots. Though ulceration and destruction of the tissues, resulting from syphilis or lupis, is one of its greatest causes. I have seen, on several occasions, caries in its most frightful forms, resulting from this affection, among the Indians of this country, where it has been led into the palate, destroying it until a terrible deformity followed, making a common

cavity of the mouth and nose, and even involving the face to a great extent.

Caries, when well established in the maxilla, has one or more openings in the gum or neighboring parts. These canals or openings, in the majority of cases, are surrounded by fungus granulation. Harris states that in the early stage there is increased vascularity and congestion, which terminates in ulceration; the bone cells become enlarged by the breaking down of their walls, and filled with semi-organized lymph, the accumulation of which is attended with the rapid advance of the destructive process. While, according to Virchow the bone breaks up in its territories, the individual corpuscles undergo a new change (granulation and supuration), and remnants composed of the oldest basis substance remain in the form of small, thin shreds, in the midst of the soft substance.

However, the whole process is a degenerative ostitis, in which the osseous tissue changes its structure, loses its chemical and morphological character, and so becomes a soft tissue, which no longer contains lime.

In treating caries, where it is not very extensive, I would first make an incision, expose the diseased part, and, if need be, I would at once pack them with iodoform gauze, or, what I think better, the boracic acid gauze, if it can be obtained, thus getting its antiseptic effects, and obviating the disagreeable odor that comes from the iodoform. Pack it, and dismiss the patient for a day or so, and, on his return, wash it with a warm solution of Listerine, and make an examination of the parts, so as to see how far the disease has gone, whether it has involved several roots or one root of the tooth or teeth, as it may be; then we know how far to proceed intelligently with our operations. The sense of touch will enable us to determine whether the bone is softened; we may, without the aid of vision, be able to make proper surgical operations, and not go beyond the territory involved by the diseases. I prefer a long, sharp bur, passing it into the osseous cavity, excising the ends of the roots of the tooth, and the caries bone, if thought necessary. Never fail to open each nerve cavity, and clean out the remaining debris at the proper time.

Why should we cut these roots off? Simply because they stand up there, and do not serve any useful purpose, and are often a source of irritation; they interfere with the formation of new tissue, consequently it will be far better to dispose of them. Having done this, we cleanse the cavity, as before directed. When the boracic gauze is not obtainable, the iodoform I believe to be better, if used with crystals of boracic acid, as they are dissolved more slowly than pulverized acid; they are more constant in their action—in other words, we retain the antiseptic agent longer by using this crystal which dissolves more slowly than the other agent.

Having packed accordingly, a few days later we make another ocular examination, and if we see little red granulations shooting up here and there over the surface of the part, it will soon be well, for we know it is an effort on the part of nature to close the cavity and effect a cure. In these cases, what I deem far better than fabric for the closure of the wounds, is wax. It may be softened and moulded to the cavities; remove the excess up the surface, and then replace. I do this because a wax plug is better than a fabric plug, and is more cleanly. It doesn't take up any secretions, and excite further irritation. I always, from time to time, remove the inner surface of the plug, to relieve it so that granulation may go on.

By-and-by the cavity will be filled to an extent which will prevent the retention of a plug longer, and the desired effect accomplished.

Address of Retiring President.*

By N. PEARSON, L.D.S., Toronto, Ont.

The retiring president's address of a dental society in America, where there are about one hundred of such organizations, each with a retiring president, with an annual retiring address, as a literary fabrication has no latitude, though it may have longitude, and discount rubber dam in the way of stretching. There is no ligature to keep it down, though it may have holes in it and leak badly. It may embrace everything, from Adam and Eve in the garden of Eden down to the twentieth century, and the beginning of the millennial dawn in 1914, by Chas. T. Russell.

Eve, we may safely say, was the first female dentist, for we are informed that she inserted her own teeth into an apple, and they worked so effectually that there was brought about a constitutional change, and eventually a radical physical metamorphosis, which has continued ever since.

Later on, we are informed that Job was saved by the skin of his teeth.

Jonah, very innocently and unintentionally, contributed an item of interest by being the first dentist to implant natural teeth, though he was unfortunate in his choice of a patient, who after three days of constant persevering effort, fired the teeth and dentist both out of his office; and though the poor fellow was out time and labor on the transaction, he was in for a lot of experience, by which, a sadder and a better man, he went on to Nineveh, and started a successful practice. Owing, perhaps, to want of atmospheric pressure, the teeth would not stay, or it might be possible that imperfect

* Read before the Ontario Dental Association, July 21st.

adaptation to the mucous membrane by reason of bad compound, caused local irritation or stomachalgia, and patience ceased to be a virtue. Any way, the attempt was a failure as a dental operation. We are again reminded by the finding of teeth filled with cement, and even gold, in representatives of the human family that "walked in Thebes' streets three thousand years ago," that we are not the originators of the science. We are the present connecting link, striving by personal endeavor and individual and collective research into the hidden mysteries of nature and science, to unfold and make plain the intricate windings of by-paths, to the consummation of the time, when the prince of the powers of darkness shall be chained up, and the King of kings shall establish His throne upon earth, and the grim monster death on the pale horse, shall cease for a thousand years to call upon the sons of men to pay the penalty attached to his condition.

There are those present before me, no doubt, who will be still ringing the changes on bacteriology, Koch lymph, predisposing and exciting causes, hereditary predisposition, and such like subjects, in 1914, when they will be so well understood that a new science will be added to our school of practical science, called the science of living, or, the greatest and crowning science of all, the production of happiness by a skilful application of all existing sources. Teeth will not decay, because we can overcome every condition which is conducive, and which is now wrapped in mystery. Orthodontia will be needless, because irregularity will cease, owing to correct procreative affiliation. Our occupation will be gone, and we may write "Micawber" over our doors. That is, supposing this era does dawn upon us in 1914.

As the annual meeting of our Society has again arrived, and the programme is placed before you, I feel proud to have to say that it is a good one, and ought to be listened to with satisfaction and profit by every member of the Society.

It is a very onerous duty which falls to the lot of the committee on "programmes" from year to year, to so vary and provide food for reflection and thought, as to render the meetings attractive and instructive.

I would recommend to your consideration the idea of appointing a committee early in the session, say the first day, whose duty it would be to appoint essayists and name the subjects for the next annual meeting; and, if thought desirable, have committees arranged to deal with subjects and collect information and compile reports to be handled by such committees at the meetings.

In this way work would be distributed, better results obtained, and much worry and hurry at the approach of the time for meeting be done away with.

The writer had entertained the idea of instituting correspondence with the leading men of the profession, pointing to a gener-

alizing of the laws of the various provinces of the Dominion, and a recognition of the right to practise in one province to be held good in another; or by a standard of qualification to be agreed upon, to be recognized in the various provinces as a sufficient guarantee of proficiency and ability, and license to practise in any province. Say for instance, the degree of D.D.S., as issued by the University, be recognized as a standard just as much as B.A. and M.A., and entitle the holder to all privileges granted to holders of these certificates anywhere in the Dominion.

I am not aware of any private interests that would suffer by such a course, while it might stimulate the profession, and those who contemplate entering upon its study, to greater enterprise and more home teaching, by seeking their education within our own borders. This could only be carried out by the University authorities of each province, adopting the plan of instituting a school of dentistry, or obtaining authority from the local legislatures to deal with the question, and appointing examiners and lecturers in conjunction with their other work.

The question of dental education is always agitating our ranks, and is in every periodical introduced by the most advanced minds and men of large experience. The way to impart the most practical training, and instil the greatest amount of theoretical and useful knowledge in the shortest time, with the least exertion of money and energy, is a question upon which there is a difference of opinion. Ingersoll holds the opinion that the lecture room as ordinarily conducted is a delusion, and that the text-books in the hands of the student, such as we might reasonably expect to find them, is much more satisfactory and profitable in the way of obtaining correct knowledge. Certainly, in the multiplication of the text-books of the most reliable and advanced literature of the profession, during the last few years, a long stride has been given in this way, for in this matter of "making many books there is no end;" and the seeker after knowledge is not at a loss for authority and precedent, as the best minds are applying themselves to writing and publishing the results of observation and research, in all the branches of the special features which we are called upon to pursue. The idea Ingersoll wishes to advance is, that by less theoretical lectures and more practical training and experience in college life, the student is much better taught, so that after spending twelve or eighteen months in the college, the student is quite prepared and competent, and feels so, to take upon himself any responsibility that may turn up; and not, as I have heard stated by graduates, "they are just ready to begin to learn how to do work." Another says he has not seen enough good practical work to give him confidence in his own ability to do it, and he must see some good operations to test his theories and add to his ideas.

If colleges were a sufficient means to the end, would post-

graduate schools be in such demand? Our own school is among the best and most thorough; the professors are capable, painstaking and exhaustive in their teaching, and stand co-equal with the best on the continent. Our students can stand alongside of any students anywhere in any respect, and any calling, and do no discredit to themselves in all matters of theory and book learning; but after all, are they as competent to take charge of an office and bring about the most desirable results as they should be, or as we might reasonably expect them to be? I am sure it is a difficult thing to draw the line in a stated subject, and know just how far to go without doing an injustice. As for instance, one student said to me: "We have now been grinding for two weeks, every day, on the urine, and just what good that is going to do me in the practice of dentistry I can't see." Another says, we are spending hours on Reagent's, chemical experiments, etc., that might be better employed on patients, gaining experience in operating and mechanical work. These are all very well in their way, and good and useful, as will be found out in good time by the student, and I would not agree with them to have such apparently non-essentials taught; but we must have the essentials, and have them well taught, if we leave the others to the persevering plodder up the hill of science to be pursued after graduating, and at leisure. Why not reverse the order of the present procedure, by making good, practical, thorough, competent dentists right in the colleges, and let the post-graduate schools work up the fine art by embellishments to suit individual tastes?

It has occurred to me, on different occasions, that our matriculation might be changed so as to allow a student of the School of Practical Science without matriculating, as now required, to become articulated. In addition to the present matriculation to accept the certificate of Practical Science Course, if indeed it would not be a step in the right direction to recommend a student taking the course in preference to some that are now required, such as Latin, Greek, mathematics, ancient history, geography, and modern languages, to the extent necessary now, and substituting such subjects as are taught in the School of Practical Science. The primary object of the preliminary education of the student is to develop, liberalize and enlarge themind and ideas, and prepare the mental calibre by exercise and brain work to apply the energies to the task of absorbing and assimilating the more direct information relating to a professional career. This is necessary in all walks of life of the higher pursuits, and it matters not so much as to the study, so long as the reasoning faculties are brought into play and the mind developed.

Scientific research is always interesting; and fascinating to many; and is becoming more and more the fashion every year, and might be very properly adopted as a standard of matriculation, and the certificate as issued by the School of Practical Science accepted by our

College. I am aware of the fact that no very high standard of education is required for the entrance upon the lectures. A common school education is sufficient, or say the entrance examination; but is this not sufficient, along with the knowledge obtained at the school in certain subjects? We could not expect, it is true, that a student would go through with all the subjects taught, as they are numerous, difficult and not essential, though very useful in any sphere. I apprehend that such a course would be a liberal move, and the means of a more solid foundation and broadening of our platform, enabling the students whose tastes preferred this line of study to exercise it in preference to arts and languages, or history and geography.

We must be scientific dentists or be failures. The dental science is intimately connected with the other sciences—inseparable from medicine and metallurgy; geology and mineral teeth sound euphonious. Bacteriology and caries, animalculæ and bugs, germicides, hygiene and sanitation must be understood and occupy our attention, if we are to keep pace with the onward march of the times. Our coming men must be breast-up in the race, side by side and shoulder to shoulder with progress, or get left.

While on the subject of education, is there not a want felt in the direction of education among the masses? Should there not be a more systematic and comprehensive means of imparting knowledge to the children in the public schools? They are taught hygiene, temperance, agricultural chemistry, botany, and other kindred subjects. Why not have dental histology, and care and treatment of the teeth to an extent that would be advantageous in early life, and the lessons taught thus early be a means of usefulness in the years to come of mature age and useful to the rising generation? It has, no doubt, come to the notice of every practitioner that the children are made to suffer by the ignorance of the parents in regard to their teeth.

I feel it my duty to call your attention to the fact that, since our last annual meeting, certain members have fallen from grace and violated the rules of the Society. This is a painful duty to perform, and I would much prefer to have left it undone, or rather to not have the occasion for it. Upon two separate occasions of our annual meetings we have presented the opportunity to qualified practitioners to sign our constitution and become members of our Society. Scores have responded to the announcement and cheerfully subscribed to the few articles of agreement, called Code of Ethics, experience having demonstrated the necessity of having some means of controlling the membership or regulating our actions. Others have not done so. The greater number are quite agreed as to the necessity of this course, but have not taken advantage of the same from want of opportunity, but all the respectable

profession may, as time goes on and the meetings grow in interest, feel the necessity and profit of joining with us in the endeavor to keep up with the times. Now, what shall I say of those who have freely and voluntarily subscribed to the articles of faith, and have been weighed in the balance and found wanting? Shall I dignify their action by noticing it? Shall I lower the dignity of our honorable calling by bringing to your notice the contemptible, dishonest, disreputable and utterly unprofessional practices made use of by several who have libelled themselves by signing our books and afterwards doing the things which they ought not to have done? Fortunately they are not men possessed of any professional standing, of no reputation mentally or morally, of no social standing; and the fact of them resorting to such unworthy means of replenishing the decaying public patronage and bringing grist to the unworthy mill, is a sure indication that they are total failures along the orthodox lines, and are in need of an artificial stimulant; which fact the discerning, intelligent and well-informed better class of the community are quick to correctly interpret and appreciate at its proper value.

We do not need to search for an apology for this line of action very long, as we invariably find at the bottom either a low moral tone, a mental obscurity, or a mercenary mendacity that eclipses any good light that may have existed in their composition by contact with superior beings in earlier days, and so far forgetting the fact that they have been privileged to be called into an honorable profession, and distinguished above their meed by a degree above their ability to maintain, and superior to their manhood to aspire to; and, like water, they gravitate to the level of the sordid cesspool of their original natures, forgetting to return to the fountain of the cause of their temporary distinction, anything of the lustre of fame or light of loyalty to the profession that may have been the means of elevating them from the obscurity of their origination and their early education does not fit them for, or their vulgar tastes and coarse natures prevent them from, appreciating. You may be called upon to take action upon those recent recreants. Your constitution calls upon you to do so, and it provides for it.

I would suggest in this connection, that a change be made in the rules by amending them, so that a direct vote of the Society will be necessary to elect a member after being vouched for by a mover and seconder. I would also bring to your notice for consideration the inadequate means at the disposal of the proper officers provided by the low annual fee. With more money, more good could be done and more attractive programmes provided, which would mean better attendance and enlarged fields of useful and important subjects.

In conclusion, as the time of the withdrawal of my term of office as your President has arrived, I must embrace the opportunity of

returning to you my most earnest and sincere thanks for the honor you have seen fit to place upon me by permitting me to occupy that important distinction, trusting that the Society will continue to prosper and extend its sphere of usefulness, by adding to its numbers and attractions, until it fulfils its richest destiny and becomes the rallying point of advanced thought and professional lore for the Dominion and a shining light in the dental world.

First Dentition.*

By W. A. LEGGO, D.D.S., L.D.S., Ottawa, Ont.

The subject of first dentition contains so many points of importance to us as dentists that we cannot always hand the treatment to the physician.

I intend bringing forward only a few of the most important points, omitting histology, time and order of eruption, and not going minutely into the many complications of difficult dentition, with which it is not our province to deal.

As usual, authorities differ somewhat, so I think my object will be best attained by quoting or using some ideas gleaned from our journals and other authorities.

Infancy and childhood are important periods of life, for in them we meet many diseases rarely found in other periods of life, of which difficult dentition is one, and which causes at times much trouble and anxiety.

Normal dentition is a physiological process which may be completed without any apparent discomfort to the infant, while difficult dentition is often directly or indirectly the cause of many infantile diseases; wherefore difficult dentition may be considered a pathological process.

The development and advance of the teeth are accompanied by more or less swelling around the dental follicles, being greater with some teeth than with others. The large blunt molars are apt to cause more than the small sharp incisors. Within certain limits this swelling or congestion is physiological and not a disease, but when there is an unusual amount of swelling, and the gums become tender, painful, and redder than in ordinary dentition, and when the saliva is increased and accompanied by the usual signs of discomfort, we have a pathological condition—inflammation of the gums or gingivitis. Sometimes the inflammation over the tooth is so great that an abscess forms, which must be lanced. These symptoms are easily detected, and are not dangerous. They are caused by the rapid growth and increased sensibility of the dental follicle.

* Read before the Ontario Dental Association, July 21st.

Other complications occur in other parts of the system, as diarrhœa, irritability of the stomach, convulsions, etc., through the influence of the disturbed nervous system. Barrier believes the diarrhœa of dentition depends usually on what he calls "a sub-inflammatory turgescence limited to the gastro-intestinal follicular apparatus," and occasionally it is due to defective or altered innervation. In which case, Smith says, it would then be similar to that form of diarrhœa which occurs in the adult from the emotions.

Generally there are other causes for the diarrhœa, as unsuitable food, clothing or locality ; city infants, in hot weather, suffering most, dentition being only a subordinate cause. But there certainly is a looseness or diarrhœa connected with dentition recurring with each epoch, showing that dentition can be a cause of other diseases. It is generally admitted that eclampsia or convulsions is a common result. Barrier attributes convulsions in the teething infant to excitement of the nervous system, arising from the pain which is felt in the gums, and to a determination of blood to the dental apparatus, in which afflux the whole vascular system of the head participates. Other cases may often be found where dentition is only a subordinate cause producing a sensitive state of the nervous system, when any additional stimulus, as indigestible food, etc., may produce convulsions. When several teeth are advancing at the same time, producing much disturbance, and convulsions occur, dentition evidently takes first place as a cause. Infants who are burned or scalded are very liable to convulsions, which constitute the chief danger in such accidents. So the swollen and tender gums, proceeding from the advance of several teeth at the same time, may affect the nerves like a burn or scald, and produce the same results.

The treatment of all cases of difficult dentition must be twofold, local and constitutional. The occasions for local treatment in the mouth are easily detected and relieved. When complications occur in remote parts of the body, they are generally found without trouble.

The diarrhœa must be controlled and limited to two or three evacuations daily, as greater frequency endanger the safety of the child. (Smith.)

"Nervous affections, fretfulness, irritability, etc., may be relieved by bromide of potassium or chloral. Demulcent and soothing applications may be applied to the gums. The infant may hold a rubber or ivory ring in its mouth with apparent benefit, but a tooth should not be rubbed through with a thimble or other hard substance, unless the point of the tooth has reached the mucous membrane, for the friction will increase the inflammation."

As regards lancing, much difference of opinion is expressed. The English authorities favor it, while the French oppose it. (Rilliet

& Barthez). The lance is less frequently resorted to now since bromide of potassium and chloral have come into use as nervous sedatives, even convulsions generally quickly yielding to their influence, if the state of the bowels be properly regulated. As a general rule, lance when the gums are tense, hard and white, showing that the pressure impedes or prevents circulation. The cut will then remain open. But the greatest trouble is long before the tooth has reached this point, perhaps a month or so before eruption. What course to pursue here divides the ranks. To lance or not to lance.

Trousseau says, "that the tooth is not released by lancing the gum over the advancing crown," and Smith, "that the gum is not rendered tense by the pressure of the tooth, as many seem to think, for if so the incision would not remain linear, nor the edges unite, as they ordinarily do by first intention in a day or two."

This speedy healing of the incision, unless the tooth be on the point of protruding, is an important fact, for it shows that the effect of the scarification can last only one or two days. How long would medicinal treatment last if not repeated? What objection can there be to lancing again if the trouble recur?

He says further, "the early repair of the dental follicle is probably conservative so far as the development of the tooth is concerned. It may help us to understand how active, how powerful the process of absorption is, if we reflect that the roots of the deciduous teeth are absorbed by the advancing second without much pain or suffering from the pressure." He claims that if the calcareous particles of the teeth are so readily absorbed, what is the foundation for the belief that the fleshy substance of the gum is absorbed with such difficulty.

This seems plausible, but, on the other hand, we must remember that the absorption of the roots is slow and gradual, and that the root is not largely endowed with nerves and vascular tissue like the gum, and therefore can bear the pressure with ease; quite a different matter to the same pressure applied to the tender sensitive gum, for although gum tissue is comparatively insensitive in its normal condition, when inflamed it is exceedingly tender to the least pressure.

Naturally, growth and absorption are so nicely balanced that little or no trouble results; but when growth is more rapid than absorption, pressure, irritation, etc., follow, and this pressure is not always the same; it may be excessive for a few days, then relax while nature takes a rest before another effort is made, giving a recurrence of the same symptoms of swelling pressure, tenderness and irritability, which I think the direct result of pressure, caused by the fact that the tooth advances more rapidly than absorption makes way for it.

There is also another source of pain not to be overlooked, viz :

the reflex pressure caused by the gum upon the pulp of the tooth, which may be quite as painful as the tender gum, for at this time the root is imperfectly formed, the foramen large, and the pulp is large in proportion, well supplied with nerves and vascular tissue. The pain thus produced must be real toothache, and the nervous results those so often noticed in other parts of the system.

Unless there are other symptoms than the swelling and congestion no interference is necessary. An abscess, of course, requires lancing. Fever or diarrhœa should be relieved by medicine. If symptoms are aggravated, and convulsions threatened, all measures safe and speedy should be employed.

Lancing will generally give relief at any period, and it may be necessary to lance several times over the same tooth, but no harm can follow such a course any more than giving medicines enough to tide over the same periods of suffering. The germs of the other teeth cannot be injured if the lancing is done only over the advancing tooth. Should excessive bleeding occur, it may be controlled by pressure, powdered alum, etc., rubbed into the cut, which, if not successful, constitutional treatment should be employed (ergot of rye, etc.). Cases of excessive hæmorrhage must be very rare.

Lancing is often opposed from the belief that the scar formed would retard the eruption of the tooth. This is erroneous, for scar tissue is less highly organized than the normal, therefore more easily absorbed.

White says, "The uniting medium in the repair of a solution of continuity possesses less vitality, is less perfectly nourished, and is easier of disintegration than the original tissue. The tendency of scar tissue to break down is a matter of common observation even among the laity; and, except in the case of gum lancing, is not disputed by any medical authority. Gum tissue should be no exception, and it therefore follows that the pressure of the tooth against the gums would cause absorption more rapidly than if the lancet had never been employed."

After the crowns of the molars and the points of the cuspids have appeared, there may be more or less trouble. The molars may be bound down by fibrous bands between the cusps, which should be cut, and around the cuspids a tough ring is sometimes formed, which is stretched tighter and tighter as the crown protrudes. This should also be severed. The cuspids are more apt to be troublesome after they have pierced through the gum than before, owing to the advance of the cone-shaped point. Our duties as dentists are plain and practical, and when we meet with any complication outside our profession, the physician properly takes charge of the infant.

There will be found in most communities a deeply rooted

aversion to the use of the lancet, stronger among the less intelligent masses, but by no means confined to them. So strong is this prejudice, that in many parts of the country it is a common belief that if a child's gums are lanced it will surely die; whereas, in point of fact, I have known of more than one case, where, in the opinion of well-known professional men, death has resulted from a failure to lance at all or to lance in time, even with their best medical treatment. Is it not our duty as dentists to combat this prejudice, if it is only such? To study out the authorities on this point, and if each member of our profession can reach the conclusion that lancing is harmless and beneficial, to do his best to stamp out this unreasoning prejudice against it? In my own mind there can be no doubt as to its efficacy, having often seen the touch of the lancet give instantaneous relief to children previously suffering almost to the point of convulsions. If such a relief can be obtained without any evil results, surely it is our duty to give it a trial.

Pyorrhœa Alveolaris.*

By F. KILLMER, D.D.S., L.D.S., St. Catherines, Ont.

Pyorrhœa alveolaris, next to caries of the teeth, demands more attention from the dental surgeon than, perhaps, any other disease of the human mouth. It is essentially a disease of the peridental membrane, a suppurative inflammation by which the peridental membrane is separated from the root of the tooth, and destroyed fibre by fibre. At first, there will be seen only an irritation of the gingival margin about the teeth, which cannot be distinguished from a simple inflammation caused by tartar. If this has existed for some time, the gums appear more or less swollen, of a dark or bluish-red in color. Close examination will show that the lower margin of the membrane is destroyed in such a way, that a thin dull blade will pass up by the side of the root, and pressure upon the loose gum will cause a slight discharge of pus. This destructive process extends towards the apex of the root, following the fibres of the dental membrane, and as it follows lengthwise of the root it also more slowly widens, until it results in the destruction of the entire membrane. Rarely does it attack the entire gingival margin of the peridental membrane at once, more frequently by the formation of a pocket, which oftener passes up the length of the root to its apex before completely encircling it. It attacks the teeth indiscriminately, no particular tooth or side of tooth being more liable to the disease than another.

* Read before the Ontario Dental Association, July 21st.

When the disease is confined to one side of the root, the tooth is very liable to be displaced, gradually moving so that it protrudes in a direction from the diseased surface, or, when proximal sides of the roots are the seat of the disease, the teeth gradually separate. The margin of the alveolar process usually disappears as the destruction of the membrane advances. The gums either become hypertrophied and puffy, or gradually recede, exposing a large portion of the root. There is usually more or less of a deposit of serumal calculus under the margin of the gums, little nodules and thin scales often extending far up on the root, precipitated, no doubt, from the normal condition of the blood, owing to the low state of inflammation and retarded circulation.

This calculus, being a result of the progress of the disease, rather than having anything to do with its origin, when present, causes greater inflammation, making the disease thereby much more apparent.

A loosening of the teeth commences, which increases until they drop out, or become so troublesome that they are extracted. The time between the first appearance of the disease and the falling out of the affected teeth varies from a few weeks to several years.

A great variety of theories have been advanced as to its etiology—the salivary and sanguinary calculus theories, the theory that constitutional and hereditary causes were the prime factors in the production, mercurial taint, a catarrhal condition, and a specific infectious disease which owes its origin to the life and growth of micro-organisms. Each of these theories has its strong supporters, the last two having, perhaps, the preponderance of support. If asked to give the etiology of this disease, I would quote from Dr. Miller, who says: "Three factors are to be taken into consideration in every case of pyorrhœa alveolaris: (1) Predisposing circumstances, (2) local irritants, (3) bacteria." Any predisposition, which may be either hereditary or acquired, that increases the susceptibility of the periodontal membrane to inflammatory action, or any local irritants, such as tartar, improper use of tooth-picks, fillings extending beyond the cervical margin, use of ligatures, pressure of dentures at the roots of teeth, arsenious acid escaping from cavities in devitalizing pulps, or any other local cause that will irritate the gingival margin to a condition of inflammation, must be considered as one of the prime factors, responsible for this pathological condition. I would bracket predisposing conditions and local irritants as one factor and bacteria as the other; for where the former exist the latter have a soil favorable for their development, and it is from the bacteria or certain poisonous substances produced by their physiological process of growth that we have the suppuration characteristic of this disease.

That pyorrhœa alveolaris has no specific bacterium, can be fairly

claimed from the experiments of Dr. Miller, where in twenty-seven cases of teeth affected he made culture experiments, which yielded twenty-two different kinds of bacteria, a large number of which possessed pyogenic properties. In these experiments he was not able to determine the constant occurrence of any one particular or specific bacterium. Whether it is the micro-organisms themselves that penetrate the inflammatory infiltration, and break asunder the mutual connection of the proliferated corpuscles, preventing the reorganization of the fibres of the periodontal membrane and inducing suppuration, or whether it is their chemical products, in either case the bacteria are the active agents in its suppurative destruction. The fibres of the membrane for the greater part of the root run from the apex toward the crown and outward toward the alveolus. If by any cause this membrane becomes inflamed so that there is a dissolution of the basis substance, the cells of each fibre are set free, and so long as these cells remain in mutual contact, they may reform into the fibre again; but just in this state there is every condition favorable for the development of the bacteria that so constantly infests every human mouth, and, as indicated above, the presence and growth of these micro-organisms break asunder and destroy the proliferated cells of the fibres of the periodontal membrane, causing the disease to advance more rapidly lengthwise of the root, thereby forming the pocket so characteristic of the disease. Bearing in mind the three factors to be taken into consideration in every case of pyorrhœa alveolaris, the treatment becomes at once apparent. All predisposing conditions, if constitutional, to be removed by constitutional treatment, local irritants by their absolute removal, and the destruction of bacteria by the use of germicides.

In treating the disease, the first thing to do is to remove carefully and thoroughly all foreign substances from about the teeth. If the disease is somewhat advanced, which it often is when coming under the dentist's care, the utmost patience is necessary for the removal of every particle of deposit and necrosed and disintegrating bone.

Before commencing this operation, syringe out the pocket thoroughly with a solution of bichloride of mercury in peroxide of hydrogen (one grain to an ounce). This removes all pus and bacteria, and renders the pocket thoroughly aseptic, a condition necessary when more or less cutting of the gums and alveolar process must necessarily attend the thorough removal of all foreign particles. If necessary to gain admittance to the diseased part, to work with more certainty, split the gum over the part diseased, especially if the disease exists between the teeth. The gum will readily fall in over the part operated upon, and the tissue will reform more rapidly. When this operation has been completed and all resulting debris has been thoroughly syringed away, then

antiseptic and gerimcidal, together with local stimulating, treatment is indicated. The former to destroy the active agents in the progressive destruction of the tissue in the formation of the pockets, as has already been indicated in this paper; the latter to stimulate to healthy activity the impaired dental membrane, for in proportion to its weakened condition it furnishes a soil favorable for the development of bacteria, likewise in proportion to its healthy physiological condition it will starve out and render them inert. A remedy possessing these properties is found in the mixture of one part oil of cinnamon, two parts carbolic acid and three parts oil of winter-green, known as the one-two-three mixture. I have used this with success, but after several applications have found it best to considerably dilute the mixture with oil of anise, to prevent the destruction of the granulating tissue, or to use instead equal parts of aromatic sulphuric acid, listerine and tincture of calendula. This proves most satisfactory in stimulating the low vitality of the tissue and inducing healthy granulations for the restoration and reattachment of the lost parts. Previous to applying the mixture, carefully syringe out the pocket with peroxide of hydrogen. When the pockets have advanced to such an extent that the teeth are much loosened, it is essential that by some means, either by ligatures, by swayed caps, by continuous fillings made through the cutting edges of contiguous teeth, or by any means whatever which the ingenuity of the dentist may devise, they should be held immovable, so as to aid in the production of new tissue about the root. Whatever means may be employed to hold the teeth immovably in position, absolute cleanliness must be maintained.

If the teeth affected with pyorrhœa alveolaris are treated carefully and intelligently, in a manner similar to what has been briefly indicated in this paper, the great majority of them can be rendered healthy and useful, to the comfort and satisfaction of the patient.

Disease of the Antrum.*

By S. WOOLVERTON, L.D.S., London, Ont.

Alveolar dental abscess is a common surgical affection, attended with great suffering, and more or less serious consequences, according to the condition of the patient, the structure of the alveolar tissues concerned, and the location of the tooth.

The relation of the antrum of Highmore to the roots of the teeth in the upper jaw is such, that when disease of these organs occurs, the discharge is liable to enter this cavity, and nearly all diseases which we are called on to treat will be found to come from

* Read before the Ontario Dental Association, July 21st.

abscessed teeth, and the removal of the offending tooth, or teeth, will usually be the cure of the trouble.

In examining a human skull, properly divided for this purpose, we find this sinus presents great variations in individual cases. In some cases there is a heavy lamina of bone between the roots of the teeth and the cavity, but occasionally a case is met with in which the roots of the teeth actually project into it, covered, however, with a thin lamina of bone, in addition to the mucous membrane. Is it any wonder, therefore, that serious consequences will often arise from this, especially if the pus is not fully discharged by way of the nostril on the affected side? The pus may also find its way into the cavity, even when there is a considerable thickness of bone between it and the root of the tooth.

The disease may be either acute or chronic. In the acute forms of abscess the general law is, that the burrowing of the pus will go on in the direction in which there is the least resistance; on the other hand, the movement in chronic forms is very gradual, and is largely guided by gravitation, and therefore sinks to the lowest point. The rule is, that we will find the point of discharge below the source of the pus, and this is the reason that we find that by far the larger number of alveolar abscesses that discharge on the face are situated on the lower jaw. The burrowing of pus in the chronic forms of abscess form a very important element in their history. This presents the widest variations, and is sometimes the source of much perplexity to the physician or dentist. The diagnosis and treatment of the disease, although plain, are in many instances wholly misunderstood, and too frequently are we called upon to treat chronic cases that might have been cured at a much earlier stage of the disease, and it is a matter of regret, that some medical men (and even dentists) have so little knowledge on this subject; hence the need of specialists in this line.

The treatment of the alveolar abscess, in a vast majority of cases, presents but little difficulty. It consists in a thorough evacuation of the pus from the cavity, and cleaning and disinfecting it, and relates more especially to the removal of the cause perpetuating the discharge of the pus. Among the many antiseptics in use, there are none which answer all the requirements better than carbolic acid and peroxide of hydrogen.

The medication should take place through the opening, which will generally be found through one or more of the sockets from which the teeth have been taken, and these may easily be enlarged if necessary, and not through the natural opening from the antrum through the middle meatus of the nose, as I have seen it done, without beneficial results. It is said by some, that we obtain better results by using an atomizer than from the syringe, in applying our remedies, the spray more thoroughly reaching the

parts, but in my opinion, a common rubber bulb syringe is superior to either. In the treatment we are apt to do too much than not enough. Nature is frequently the best physician, and treating intelligently, so as to assist nature, is generally sufficient, and in cases of this kind you will be astonished to see how favorable the symptoms become, and the artificial opening closing with healthy granulations until the whole trouble passes away.

I will now relate the history of two of the most important cases that I have met with. In each instance the first upper molar was the exciting cause of the trouble, and both on the left side of the face. My observation of this disease leads me to think that this trouble is more apt to occur on the left than on the right side of the face. Why this should be so I will leave older heads to determine.

AN ACUTE CASE OF ABSCESS OF ANTRUM.

About two years ago a laborer in the car-shops of London came to consult me about a discharge that was coming from the inner canthus of the eye, and for which he had been under treatment by a physician for some weeks, who was treating it locally. The discharge was very profuse, and exceedingly offensive, so much so, that I had no desire to treat it. After hearing the history of the case, and establishing a true diagnosis of the disease, by examining the teeth on the affected side, I found that the first superior molar had a dead pulp, and was painful on percussion. I removed this tooth, and found a direct opening into the antrum. I then sent him to his physician with instructions to treat through the opening thus made. I saw him a short time afterwards, and he had made a rapid recovery, but with an ugly scar at the corner of the eye, where the pus had forced its way out. Timely treatment would have prevented this, and saved weeks of suffering as well as expense, as he was not able to attend to his work in the meantime.

Case No. 2, Chronic.—Miss B., of London, aged 19, suffered from this disease, for which she had been under treatment for more than six years previous, with four different physicians, who failed to bring about a cure, owing to a wrong diagnosis of the case. True diagnosis, as we all know, is the first requisite in the treatment of any disease. She had been treated for nasal catarrh symptoms. Offensive breath, appetite gone, languid and despondent, and had almost given up hope of being cured. Necrosis had also set in, and the spongy bones around the natural opening from the antrum were softened and coming away. This tended to make the treatment much more tedious than it would have been otherwise. When I first saw her there was a profuse discharge of mucous from the nostril on the affected side. The lower eyelid

was quite red and swollen, the conjunctiva was much inflamed, and there was a sense of heaviness in the left cheek, and other symptoms that accompany this disease. The diagnosis offered no difficulty in this case. The treatment was simple and efficacious. The removal of the first superior molar, which I found in a carious condition, allowed me a free entrance into the antral cavity. The opening in this case allowed me to treat freely, and had no difficulty in keeping it open by means of small pieces of slippery elm bark inserted into the opening. The cavity was kept clean by frequent and copious washings of warm water and salt. The case was under treatment for about six months. During this time I used injections of carbolic acid diluted, carbolated iodine, tinct. opii camph., and last but not least, peroxide of hydrogen.

The patient made a complete recovery, and her general health has been very much improved.

Her last physician told her that a cure could not be effected without her undergoing a surgical operation, and she had almost resolved to go to Toronto to have the operation performed, when she came to me for consultation.

Electricity in Dentistry.

By MARK G. McELHINNEY, D.D.S., L.D.S., Ottawa, Ont.

It has been my intention, for some time past, to write an article, or a series of articles, on the uses of electricity in dentistry; with a view towards guiding the practitioner who may have neither the time nor the inclination to make a critical examination of the subject, in the practical use and relative value of the various electro-dental appliances at our disposal. I am inclined to discuss this subject for various reasons. I have several times been asked by brother practitioners to put my experience into a form by which others might be benefited; and, moreover, I cannot fail to recognize that, owing to lack of knowledge of electrical science on the part of many members of our profession, they have frequently been sold appliances of no practical value, and for which they paid exorbitant prices. Electricity has many valuable uses in dentistry and in medicine; but, owing to its intangible character, its seemingly unlimited powers and its mysterious manner of acting, to which is added the general ignorance of the public relating thereto, it has become the mainstay of charlatanism, the never-failing and universal specific of the quack.

It is my intention to discuss this subject under two general

heads, viz.: Electricity as a motive, illuminating and heat-producing power ; and, Electricity as a therapeutic agent : the first to include its application to lathes, engines, lamps, plugs and annealers ; the second to refer to its use as a cautery, a stimulant, and anæsthetic.

As a motive power, electricity possesses advantages over all other means. It is cleanly, almost noiseless, easily controlled, and not unduly expensive. The extent of these advantages depends upon the source of current. Where the current can be obtained from the street circuit, thereby giving the user nothing to do except to turn on or shut off the current according to requirement, the advantages reach their maximum. Where a street circuit is not available, as in many small towns, making it necessary to resort to batteries, the advantages are reduced to a minimum ; in fact, they become so unimportant that I would strongly advise any one whose knowledge of electricity is *nil* to let batteries severely alone, as, even under skilful management, they are occasionally unsatisfactory, while, under carelessness and ignorance, they become worse than useless.

Given a fair knowledge of the care of batteries, and a reliable battery, there is a certain amount of satisfaction, but I have often wondered whether the temptation to use such power arose from its real value or from the interest taken in experimenting, for it is a fascinating study, not to mention the air of learned mysticism that seems to hover about a place wherein there are electrical appliances. For the average practitioner, foot-power is as much superior to battery power as is power derived from a street circuit superior to foot-power. The electric dental engine that is run from a street circuit is the best of its kind, since it gives great speed, variety of position and complete control. Another appliance that has been but infrequently used by us is a ventilating fan, which is suspended near the chair, and which is a positive luxury in hot, sultry weather. The fan not only keeps the patient and operator cool, but prevents the ever-troublesome fly from making a temporary resting-place of their features. To run the polishing lathe by electricity is a luxury that all could appreciate but few attain. When one has labored all day at the chair, and, owing to some unavoidable circumstance, a plate has to be finished at night, the idea of polishing without labor is an invaluable satisfaction. The mouth lamp is another and, perhaps, the most useful appliance given us by electricity ; for the others, we had progenitors and have substitutes, but this stands alone as one of chained lightning's exclusive boons. It facilitates examinations and renders us independent of dark days, when delicate operations are most difficult, while for extracting at night it cannot be equalled. I have constructed an appliance, which is attached to my operating

bracket. It is made adjustable, so that the light may be thrown directly upon the part and from either side; thus, while supplying the oral cavity with sufficient illumination, it is completely clear of the movements of the forceps or other instruments.

The lamp-holder is made somewhat after the manner of a naval search light, on a small scale, there being a conical reflector at the back. This lamp does not go inside the mouth, but throws a shaft of brilliant light instead. I have also a small lamp arranged to go inside the mouth, but have not found it nearly so satisfactory. Its chief drawback is heating, while its bulk is undesirable. I am aware that mouth lamps are manufactured and sold, and therefore do not claim any originality except in matters of detail. When electrical power is available, I would suggest that no dental office is fully equipped, both for the comfort of the operator and the welfare of the patient, if the practitioner does not, as far as possible, use the advantages offered by electricity as a motive and illuminating power.

With reference to its use for annealing and other heating purposes, excepting cautery, which I shall mention later on, I do not see wherein it is greatly superior to alcohol. It may be that I have not seen the latest appliances for these purposes, but so far the alcohol lamp seems to be the best up to date for annealing, as is the hot-air syringe, or kindred appliance, the best for drying purposes.

Dental Legislation in Canada—The Chain Complete.

PRINCE EDWARD ISLAND.

An Act respecting the practice of Dentistry and Dental Surgery.

[Assented to 15th July, 1891.]

Whereas it is desirable to regulate the practice of dentistry in the Province of Prince Edward Island.

Be it enacted by the Lieutenant-Governor, Council and Assembly as follows:—

1. This Act may be cited as "The Prince Edward Island Dental Act."

2. That no person shall practise the profession of dentistry or dental surgery in the Province of Prince Edward Island without having first received a certificate as hereinafter provided, entitling him to practise dentistry or dental surgery.

3. That such certificate shall be issued by the Provincial Secretary, upon production to him of diploma of graduation in dental surgery from the faculty of any Canadian Dental College, or the faculty of any Canadian university having a special dental department, or from any such institution duly authorized by the laws of Great Britain or any of her dependencies, or from any dental college in the United States of America recognized by the National Board of Dental Examiners of the said United States of America; or from any recognized dental institution of any other foreign country which required at the time of issue of such diploma or license, attendance at a regular course of lectures, and an apprenticeship of not less than two years; or a person who has been in regular practice in Prince Edward Island as a dentist or dental surgeon for a period of six months, immediately preceding the passing of this Act; and it shall be the duty of the persons claiming to be entitled to the certificate required by this section to produce to the said Provincial Secretary evidence, satisfactory to him, of his being entitled thereto.

4. And it is further enacted that notwithstanding anything herein contained such certificate as aforesaid may be issued to any dental student who at the time of the passing of this Act was actually apprenticed to any surgeon dentist in this Province, and who shall actually at the time of applying for such certificate, have served an apprenticeship of at least two years, and who shall also produce a certificate to the Provincial Secretary from such surgeon dentist testifying to the effect that the applicant was duly apprenticed before the passing of this Act for at least one month, and has at the time of application completed an apprenticeship of at least two years. Provided always, that nothing herein contained shall be construed to require physicians, surgeons, or others to take out such certificate for the purpose of qualifying them to extract teeth.

5. That before any such certificate is granted, the applicant shall pay the Provincial Secretary the sum of five dollars.

6. After three months from the passing of this Act, any person not holding a valid certificate issued by the said Provincial Secretary as aforesaid, who practises dentistry or dental surgery, except extracting teeth, shall be guilty of an infraction of this Act, and shall be liable upon summary conviction, before the stipendiary magistrate of the city of Charlottetown, or the stipendiary magistrate of the town of Summerside, or before any two Justices of the Peace for the county in which the offender resides, to a fine of not less than five dollars, nor more than twenty-five dollars, besides costs of suit, to be levied by distress of the defendant's goods and chattels, or in default thereof to be imprisoned for a period not exceeding one month.

7. That no person who has not received the certificate required

by this Act, shall recover in any court of law any fees of money for any professional services, or operation performed by him, nor for any materials provided by him in the practice of dentistry, or dental surgery.

8. That nothing in this Act shall be construed to prevent surgeons or physicians from temporarily filling teeth or otherwise attending to them, for the prevention or cure of toothache.

Selections.

"Save Your Teeth."

AN EXPERIENCE IN A DENTIST'S CHAIR.—"A LITTLE
NONSENSE NOW AND THEN," ETC.

When a dentist says to you that he can "save your teeth," tell him that you would rather die toothless than be ground to atoms, stabbed to the nerve centres, prodded with a buzz-saw and gagged with large sections of India rubber sheets, merely to save a few bits of undesirable bone. The first thing the dentist did to me when he undertook to "save" my teeth, was to tip me back in a chair and prop open my mouth with a stick. Then he lined my mouth with rubber and attached weights to that portion of the lining which hung outside. Then he put a bib under my chin and stood off a little way and gloated over me. I tried to tell him what I thought of him, but was past articulate speech. "Pleasant afternoon," he said, taking up a battle-axe and stepping on a high stool where he could overlook the field of operation. After he had quarried the cavity, and blasted it out, he called an assistant and bade him turn a treadle. A big bumble bee immediately flew out of the revolving spokes and charged at the newly made cavity as though it was a flower cup full of honey. I saw stars. I heard a million slate pencils squeaking over a gritty surface. I felt cold hands toying with each particular vertebra of my spine, and a Waterbury watch seemed merrily winding in each ear. I tried again to speak, but my efforts were in vain. I would have given uncounted gold just to swallow. How little we appreciate our blessings until deprived of them! How unmindful of my opportunities had I been all through those vanished years when I could swallow or not swallow, as the mood overtook me. What countless

times I had performed that blessed act unwittingly, and now I would have sold my birthright (if I had one) for the power to repeat the blessed operation.

It is generally at this juncture when, between the pangs of delayed deglutition and the consciousness of feeble-minded drolling, the spark of reason bids fair to be extinguished forever, that the dentist begins to joke. What avails the majestic glance of a wrathful eye when the lower features are swathed in a damp sheet? My attempt at scornful protest was like the attempt of a teething babe to hurl the sevenfold curse of Rome. Alarmed perhaps at the pallor which I knew full well was creeping over my face, my tormentor finally removed the stick from between my teeth and gave me one more chance to swallow, and to appreciate to its full extent what the poet meant when he carolled the glad refrain, "Wipe off your chin."

"You can come again Saturday," said the dentist as I reeled across the floor and donned my hat. "I shall never come again!" said I in hollow tones like a voice from the tomb. "You will lose your teeth if you don't," said he. "Yes?" whispered I, leaning my tottering frame against the door post for support. "And what if I prefer to lose my teeth rather than lose my reason and my life? What I have suffered in your den, old man (he was a gray-headed villain of full sixty summers), has shattered my nerves for years to come. The horror I have endured with your buzz-saws and your battle-axes, your patent 7 by 9 drills, and your circular-action battering rams, have been more of a loss in mental strength and physical aplomb than to have laid down every tooth I have in the dust. When you have patented a process by which dentistry is made not any more painful than guillotining I shall call again; until then, old man, adieu!" (N. B.—Pride will make any woman tell the worst sort of fibs. Notwithstanding my vow, I shall be on hand Saturday, and that dentist knows it.)—*Chicago Herald.*

Editorial.

How to Treat Quacks.

To promote right-doing, and punish wrong-doing—that is one of the main objects of dental legislation. The restraints of law are indeed a severe personal "injustice" to law-breakers; but, fortunately, there are more law-keepers who wish to do right, and who will insist even upon "the professional liar" obeying the law.

There is just this difference between a thief and an illegal dental practitioner—the former finds the law against theft personally inconvenient, the latter against illegal practice, but the latter is as much a law-breaker as the thief. Society needs educating upon this point. If our efforts are to succeed in protecting the public from the imposture and mendacity of the few men in and out of our ranks who thrive by open lying, the licentiates who are not on the Boards have plenty of work to do. It is as necessary to watch and punish one quack as one thief. If thieving is made easy, the number of thieves will increase. It is only the fear of punishment that saves society from swarms of rascals. If the penal clauses of our dental Acts are not enforced when the opportunity offers, the temptation to defy them will grow.

Expulsion from the local societies, personal as well as professional ostracism from any sort of personal or professional intercourse, should be the treatment meted out to quacks. When men despise the common decencies of professional life, and make fraudulent boasts of superiority, while other dentists know they are inferior, and are not personally able to do what they boast about, why should respectable dentists voluntarily degrade themselves to their level, by recognizing them in the office, or even in the street? A drunkard may be pitied. A dentist who acts the quack ought to be shunned like a pickpocket.

New Brunswick and Nova Scotia Associations.

We regret that we have to defer the report of the first annual meetings of the above sister associations until the next issue, when Dr. Cogswell's paper on "Dental Ethics" will also appear. The reports were not received until this number was almost completed.

Dr. W. C. Barrett in Harness Again.

Everybody who knows Dr. Barrett will feel like congratulating the Chicago Dental College and the *Dental Advertiser*. The College has secured his services on its staff for a course of lectures on "Comparative Dental Anatomy." The *Advertiser* has just announced that it has secured him for its editor. The profession will reap the benefit.

"Thanks all the Same."

We have to thank the S. S. White Co. for advanced sheets of the report of the National Association of Dental Examiners, and the National Association of Dental Faculties. Unfortunately they were sent to the wrong address, and we did not receive them until all our contemporaries had published them.

The Chain Complete.

Little Prince Edward Island holds out its hand from the Atlantic, in this issue, to British Columbia on the Pacific. Our Canadian chain of dental incorporation is complete. There are matters that might be greatly improved in all our Provincial Dental Acts, but, as the old saying goes, "half a loaf is better than no bread."

Code of Ethics—Article II., Section 3.

The editor of the *Advertiser* gently raps our knuckles for our remarks in our last issue on the above subject. Perhaps it would have been better had we said nothing or said more, as our good friend quite misunderstands the position we assumed. We are utterly opposed to such associations as the Goodyear Dental Vulcanite Co. and the International Tooth Co. Our object was to plead for the relaxation, in some measure, of the severity of the code applied, not to such companies as those referred to, but to individual inventors, who impoverish themselves while in scientific discovery, for our benefit as well as their own, and who cannot afford to give away the result for nothing.

In our next issue we shall explain our views more fully, and perhaps more accurately; but we do not think they differ much, if any, from those held by the editor of the *Advertiser* when, referring to the Bonwill engine and mallet, he wrote as follows ("Independent Practitioner," Vol. VIII., page 330): "The propriety of securing a monopoly of manufacture by patenting the various devices and improvements made has long been a vexed question in dentistry, but we believe that few object to remunerating the frequently protracted studies and long course of experimentation necessary to perfect an invention, by paying a reasonable royalty

upon any really meritorious and original device. It is the taking out of patents upon trivial modifications, too often the securing of them upon devices and methods as old as dentistry itself, against which practitioners protest. One feels outraged when a claim is made for royalty upon and damages for use of some device which he has employed for many years, but for the essential point of which some dental pirate has secured a patent in secrecy and by stealth. Such claims are scarcely worth contesting, for it is usually cheaper to pay the amount than to fee lawyers. The inventions of Dr. Bonwill do not belong to this class, and all will rejoice that he has received a fair reward for the time and labor spent in perfecting them."

Just so. To repeat: "Members of societies who depart from the code have no right to complain if they are forced to conform to them, or forced to retire. But it seems to us that an inventive genius merits some substantial reward for the labors of a lifetime. How shall we encourage this, and yet keep such men in our societies?" Surely the editor of the *Advertiser* does not want to "encourage them with a club." The question cannot stand that way. We need all the inventive talent we can keep in our societies. The litigation of the International Tooth Crown Company *vs.* Edward S. Gaylord *et al.*, recently decided in the Supreme Court of the United States, against the Company, though it did not practically affect us in Canada, was watched with deep interest, and the result is rejoiced in by the profession in Canada. We can have no sympathy with such fraudulent actions. But there is no analogy between the Company and the individual cases which prompted our remarks.

From many sides we have received sensible letters, thanking Dr. Johnson for his plain talk in our last number. There are some dry bones in all the Provinces that need to be stirred. It is a particular cause for regret that the able papers read by Dr. Johnson could not be produced in this journal, because our worthy contemporary the *Dental Review*, of Chicago, had a prior claim. We would advise our readers to get the August and September issues. 66 Madison St., Chicago.

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